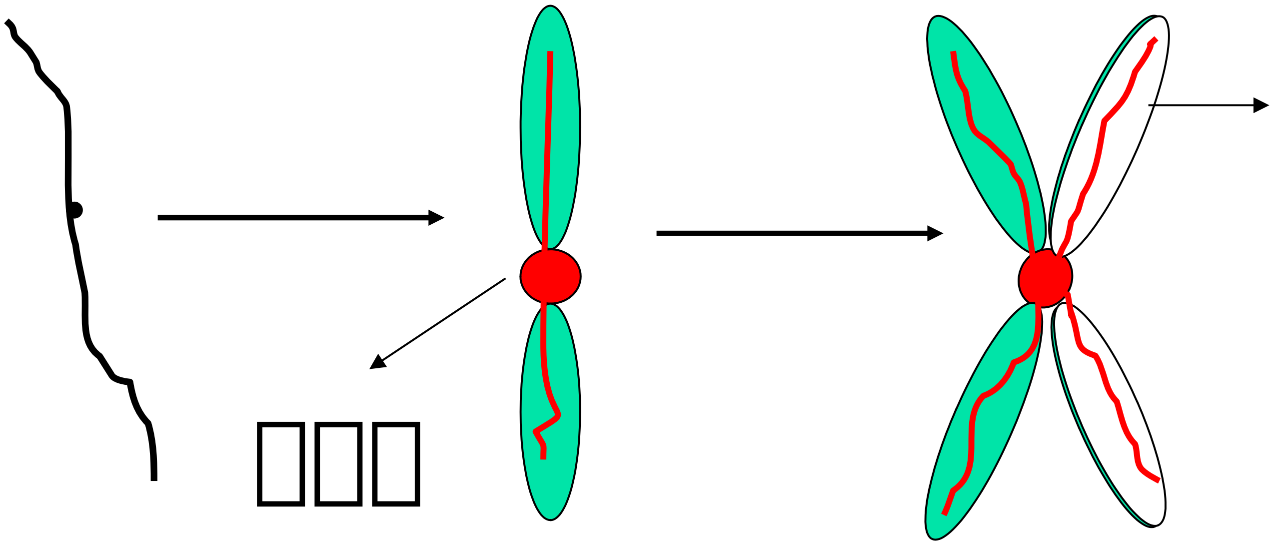
[illegible]

[illegible] **DNA** [illegible]



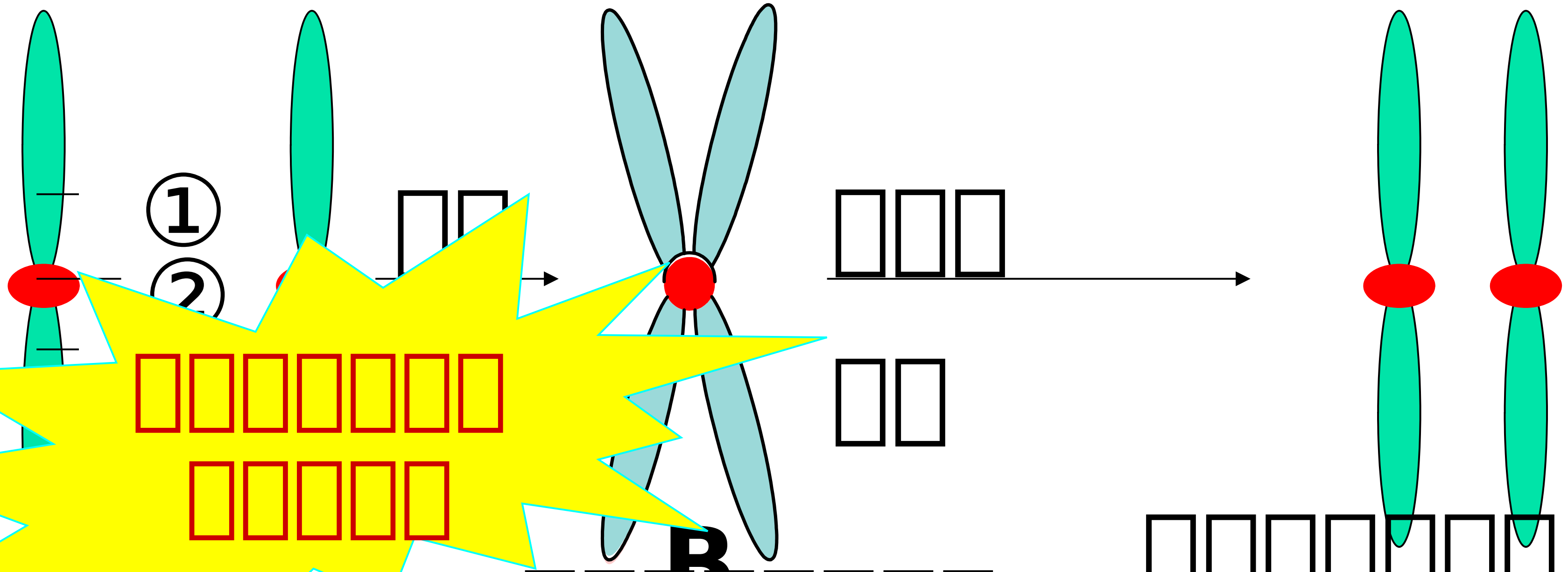
[illegible]

[illegible]

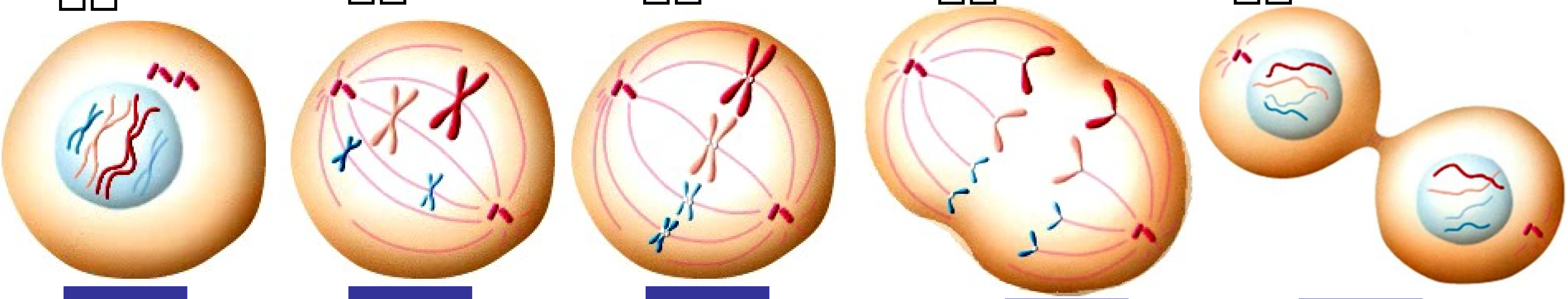
<u>**1**</u> [illegible]　　　<u>**1**</u> [illegible]

<u>**1**</u> [illegible] **DNA** [illegible]　　　<u>**2**</u> [illegible] **DNA** [illegible]

<u>**0**</u> [illegible]　　　<u>**2**</u> [illegible]

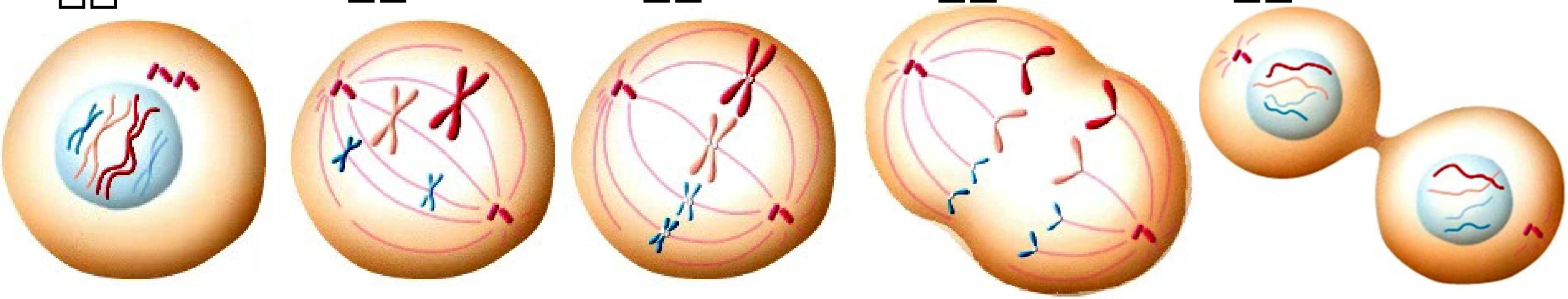


①
②
A
B



D

[illegible] [illegible] [illegible] [illegible] [illegible]



- **DNA** [illegible]

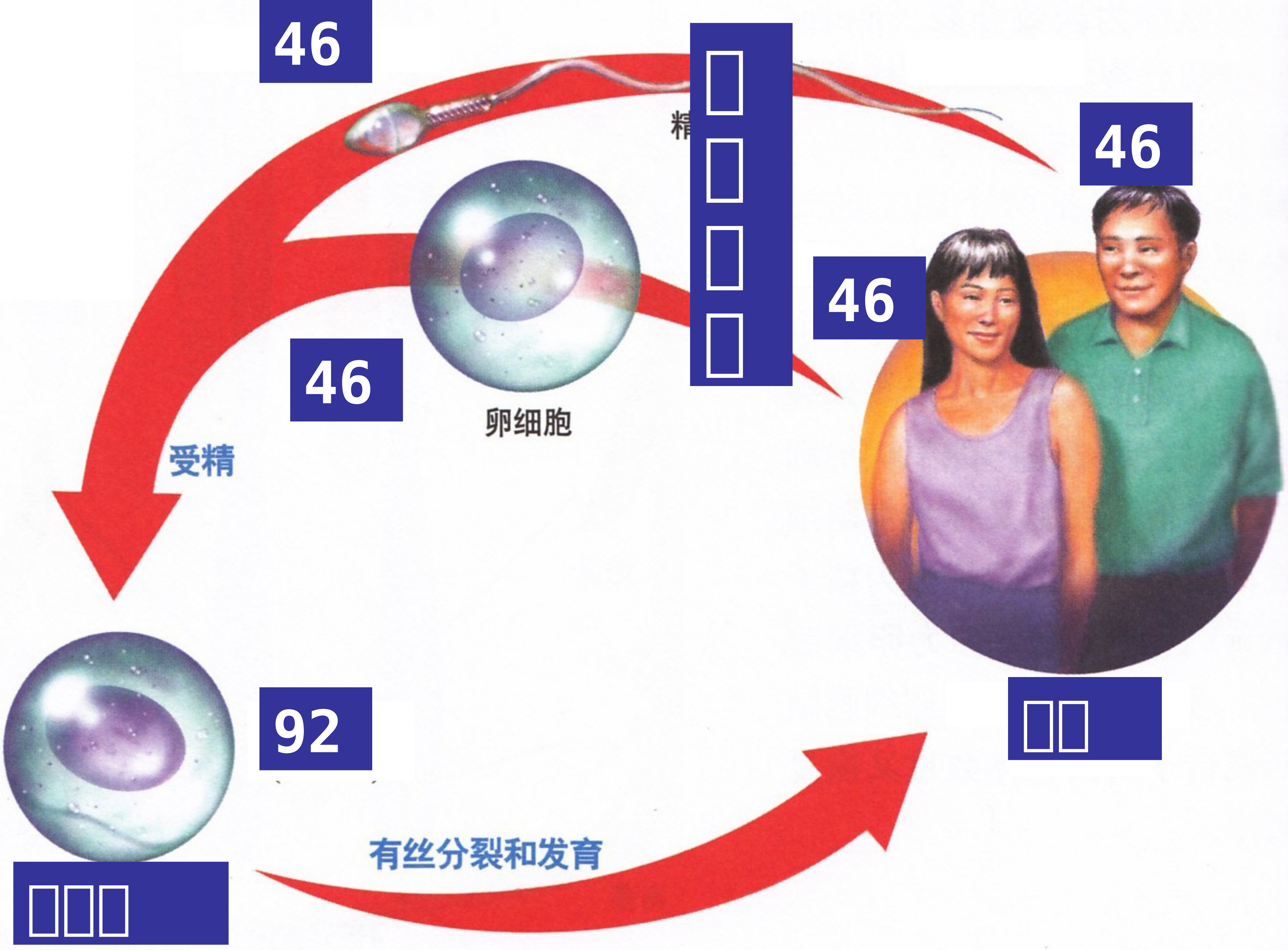
DNA [illegible] → **DNA** [illegible] → [illegible]

- [illegible]

[illegible] → [illegible] → [illegible]

- [illegible]

[illegible] → **DNA** [illegible] → [illegible]


46
精
46
46
46
卵细胞
受精
92
有丝分裂和发育

[illegible] [illegible]

- [illegible] 1 [illegible] [illegible] 1

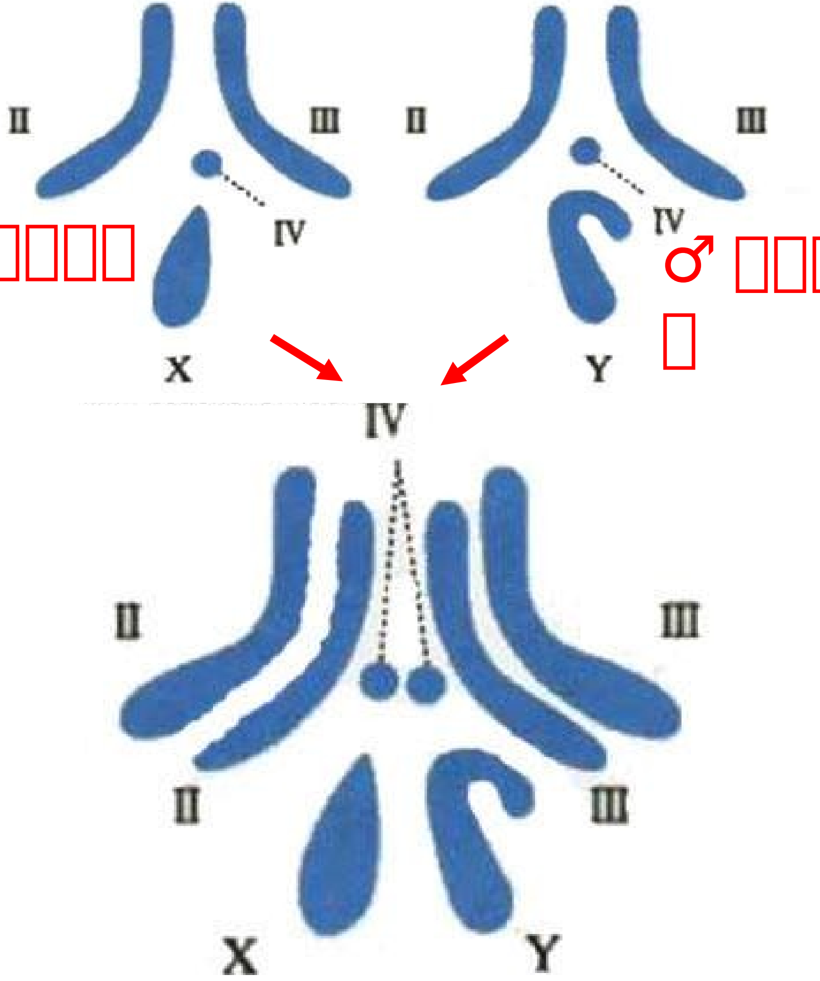
[illegible]

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

[illegible]

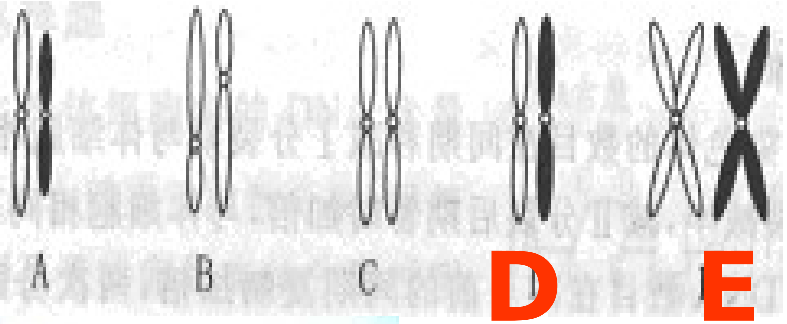
P18

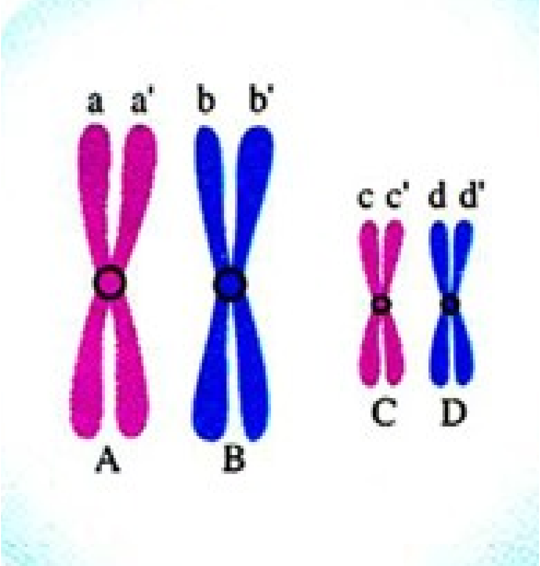
1. [illegible]
2. [illegible]



♀ [illegible]

♂ [illegible]





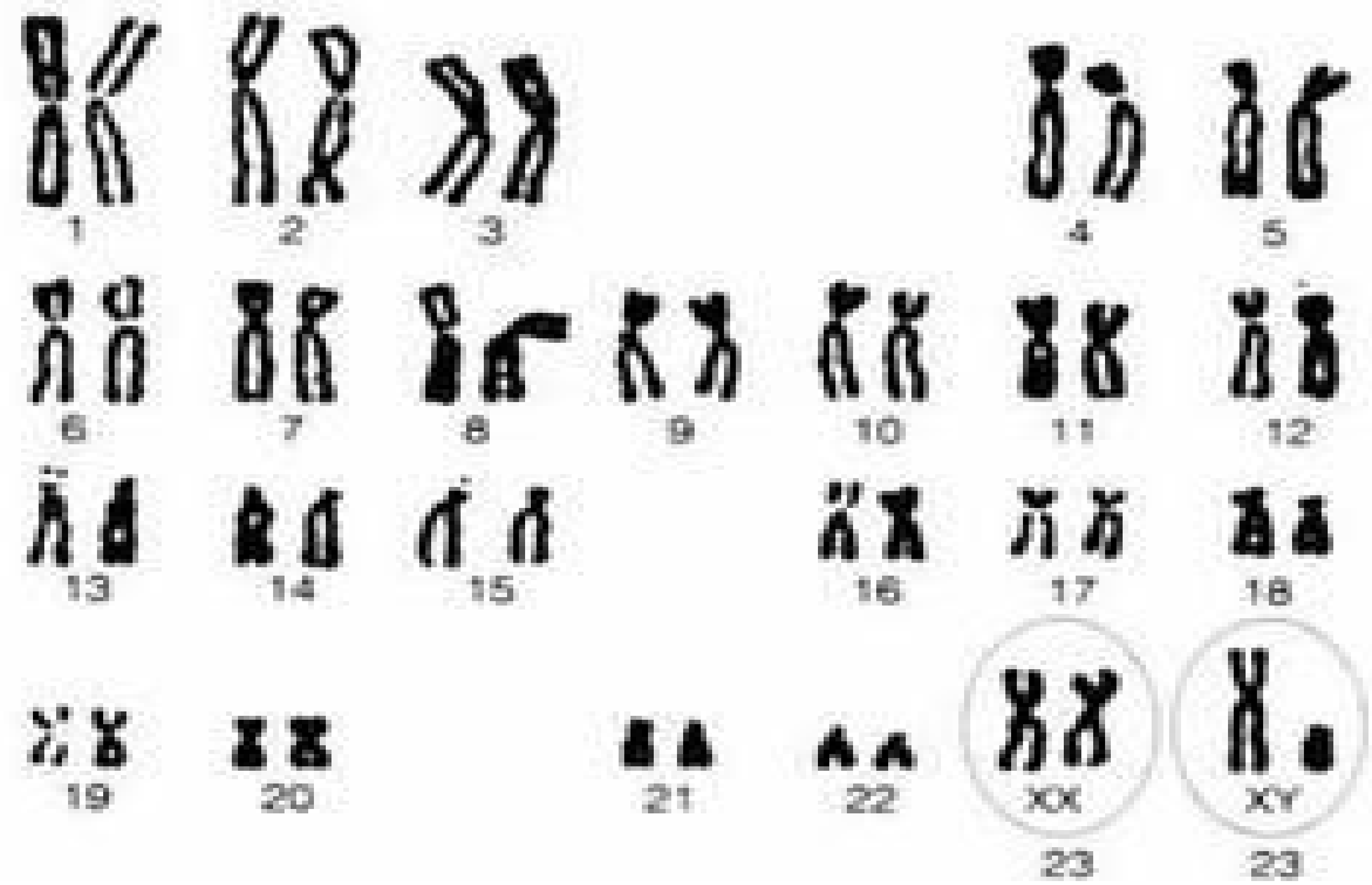
A [illegible] B [illegible] [illegible]

A [illegible] C [illegible] [illegible]

a [illegible] a′ [illegible] [illegible]

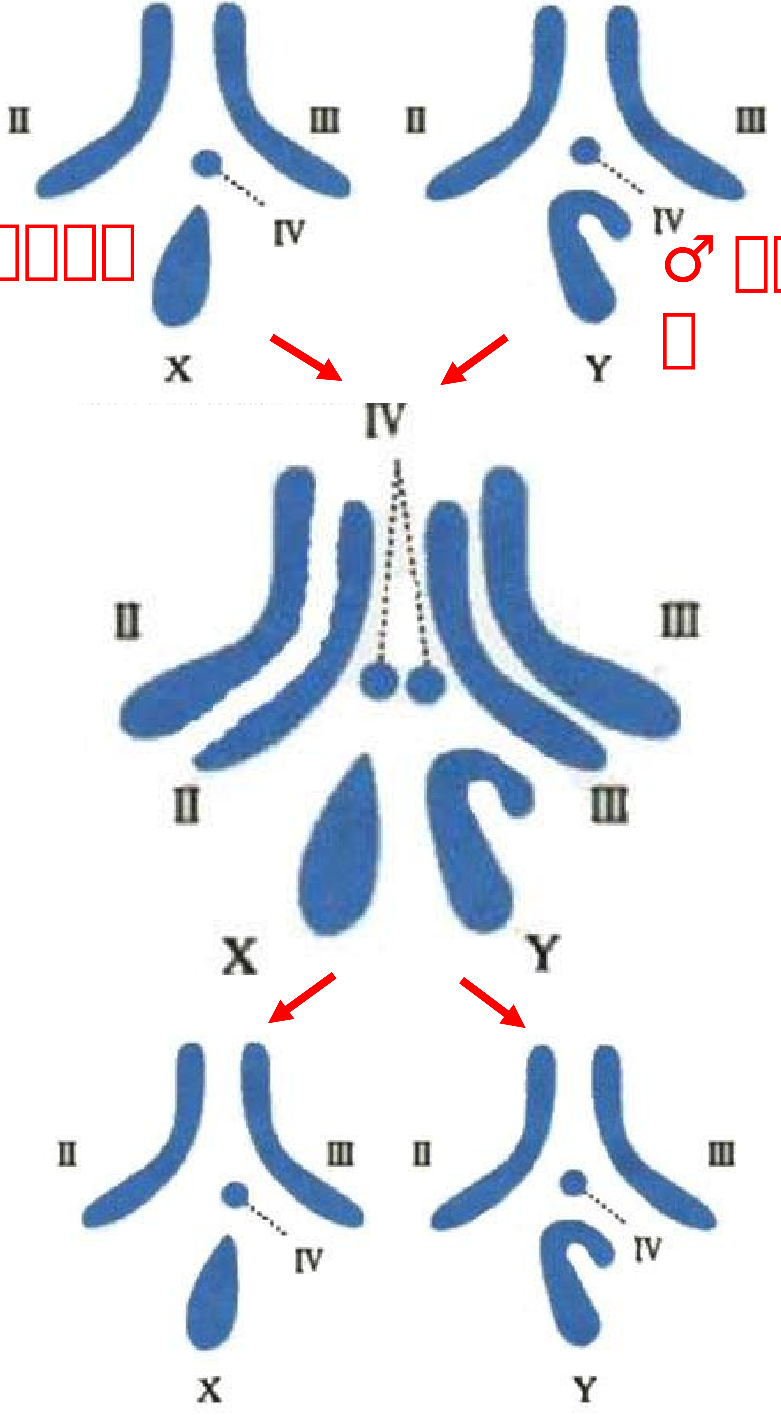
a [illegible] b′ [illegible] [illegible]

[illegible]


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
XX
23
XY
23

[illegible]

P18



1. [illegible]

2. [illegible]

3. [illegible]

[illegible]

[illegible]
[illegible]

- [illegible]
- [illegible] 2-2 [illegible]

1 [illegible]→___→___→___→ **4** [illegible]

1 [illegible] —[illegible]→ **1** [illegible] —MI→ **2** [illegible] —MII→ **4** [illegible] —[illegible]→ **4** [illegible]

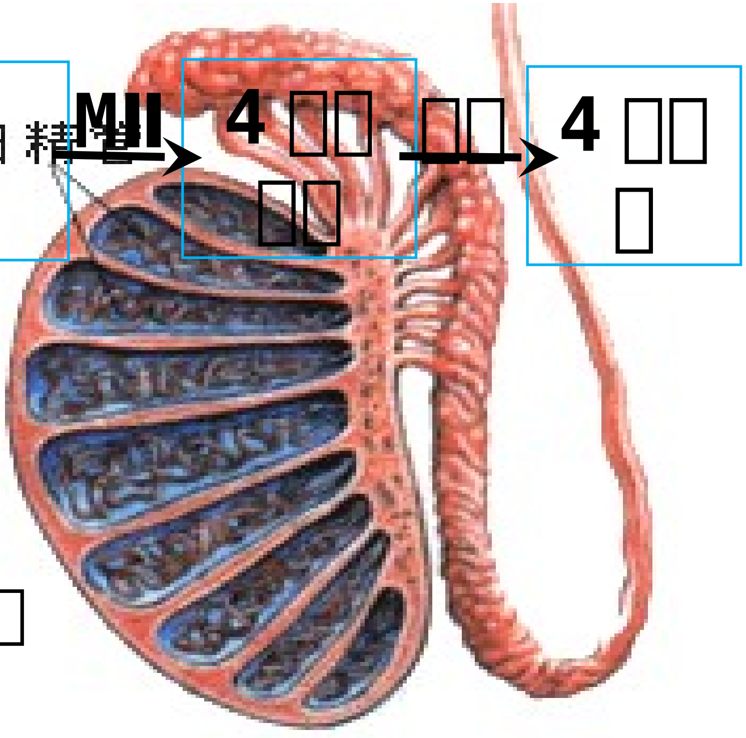
[illegible]

[illegible]

[illegible] [illegible]

[illegible]

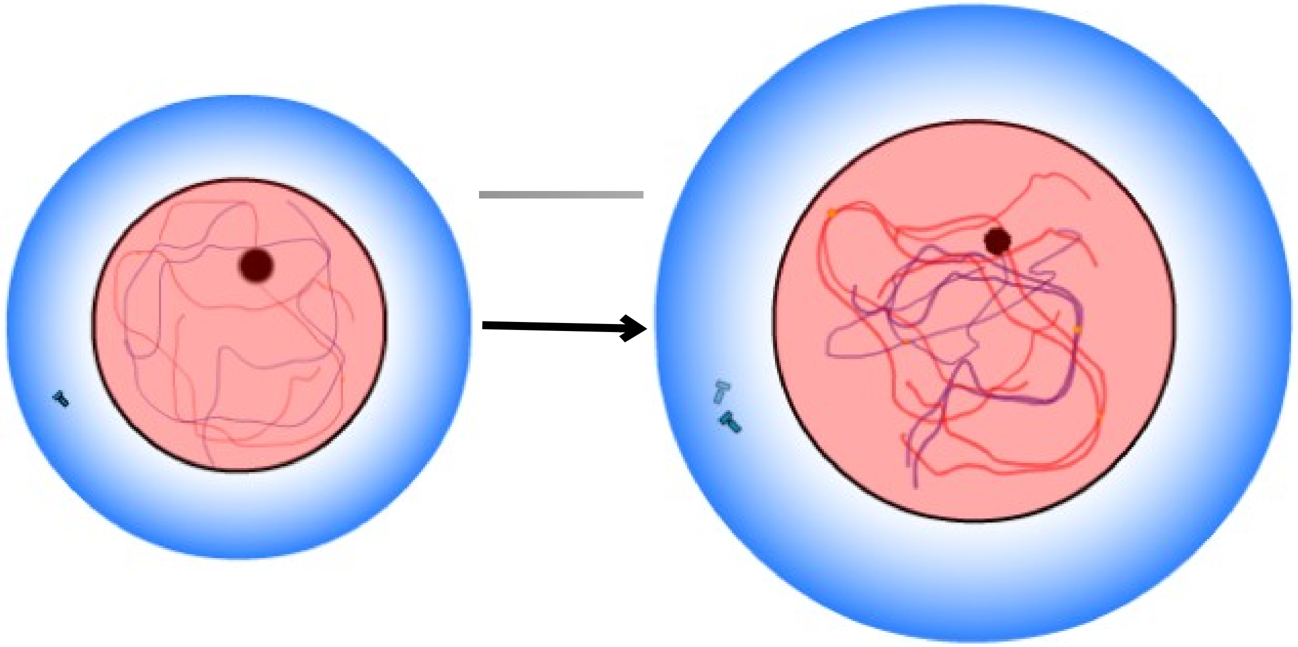
[illegible]



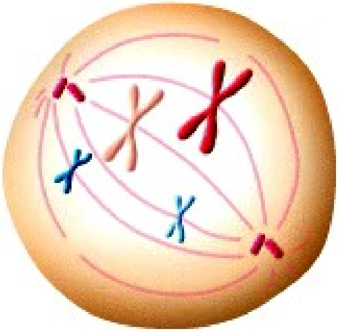
[illegible]

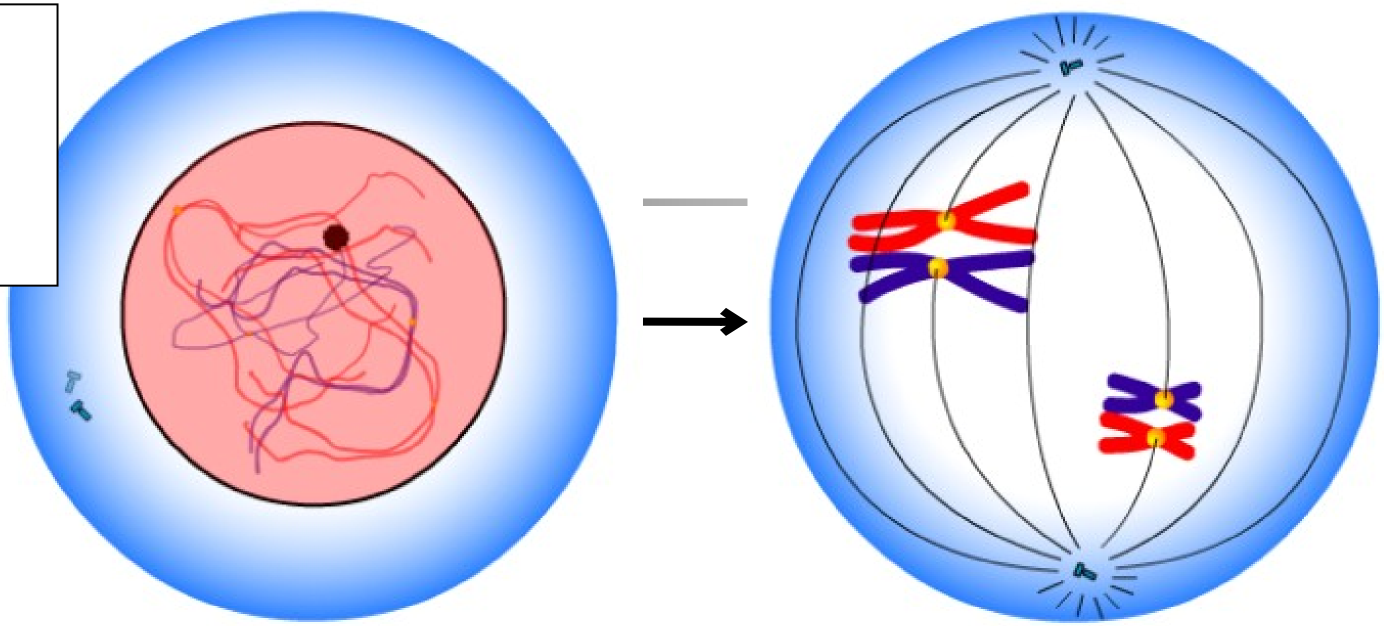
- [illegible] 1 [illegible] 2

[illegible]



- [illegible]
- [illegible]

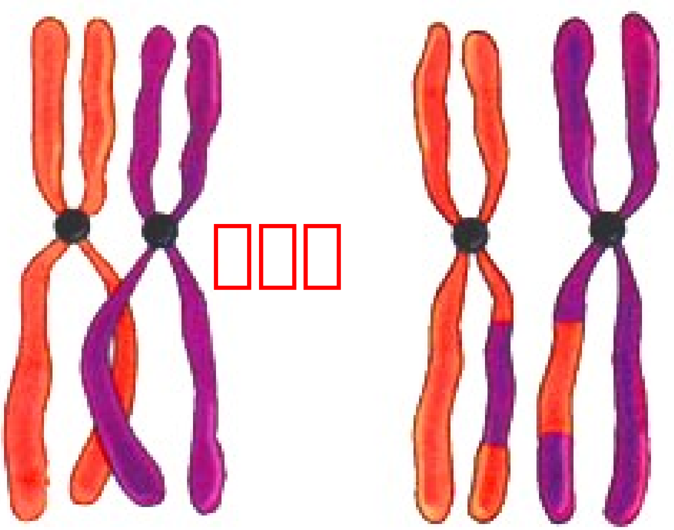




MI

[illegible]

1. [illegible]
2. [illegible]
3. [illegible]

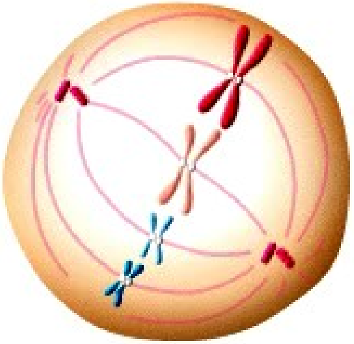


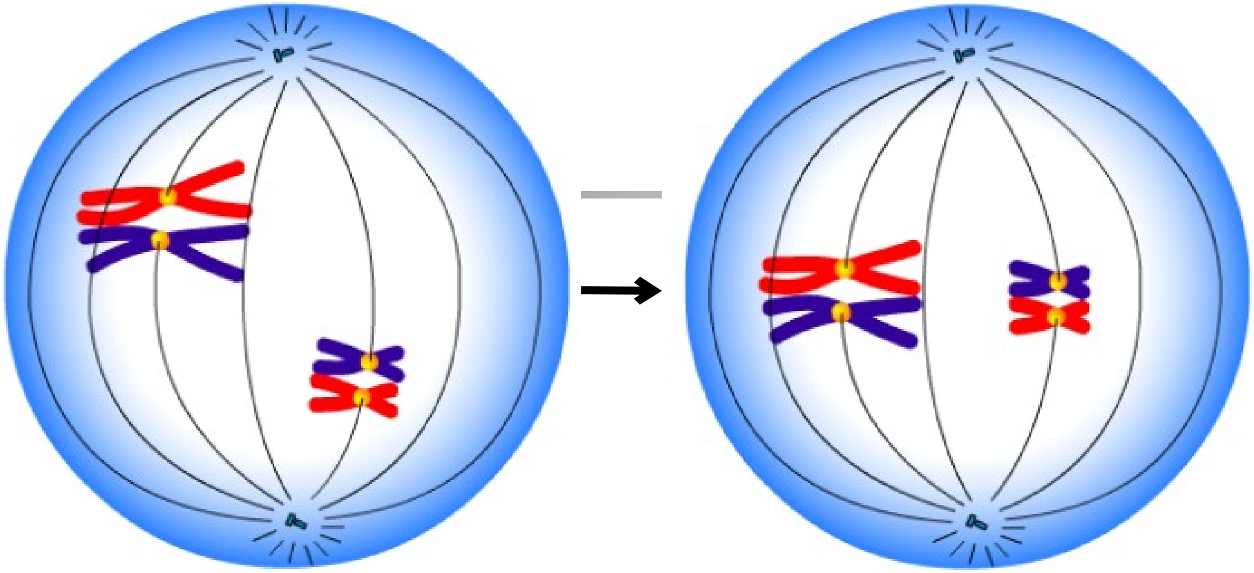
[illegible]

[illegible] .1

[illegible]

[illegible]

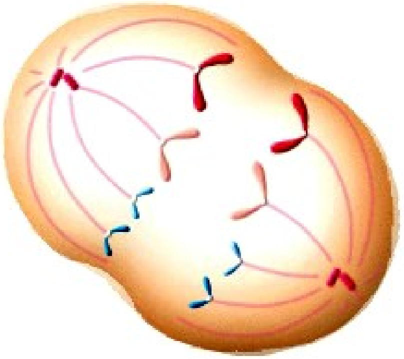


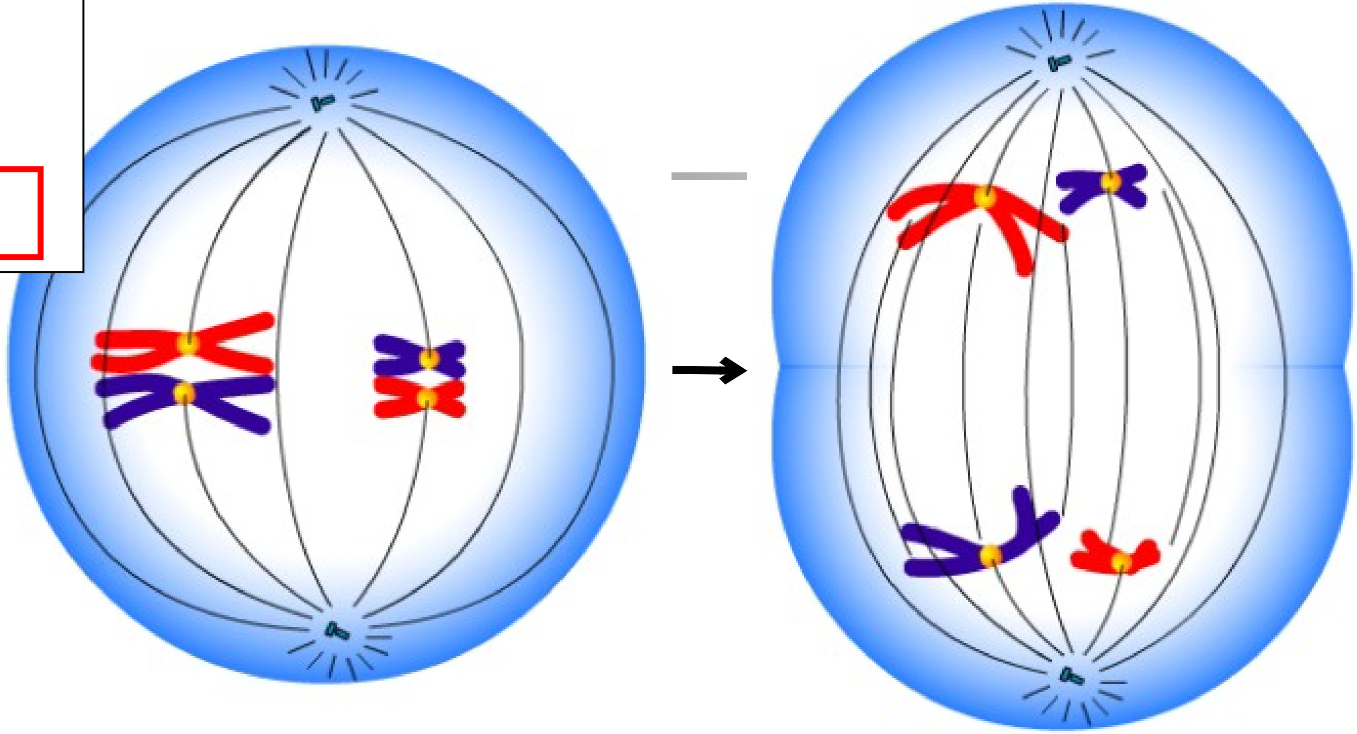


MⅠ [illegible] **MⅠ** [illegible]

- [illegible]

[illegible]

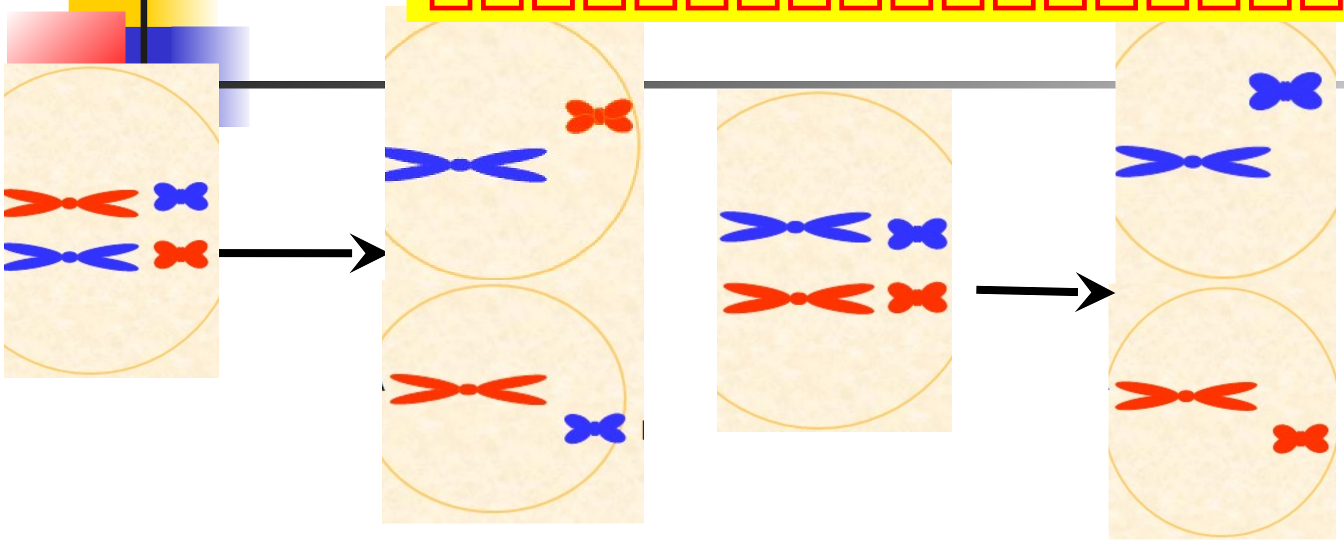




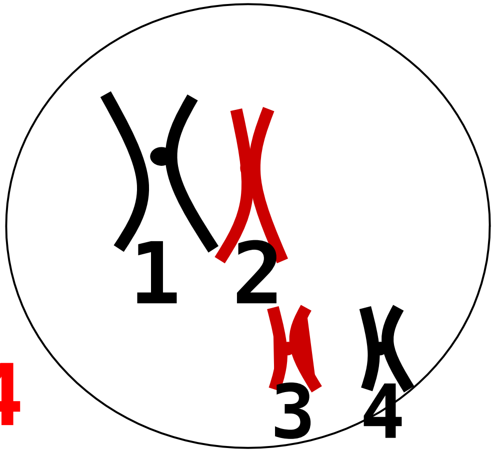
MI [illegible]　　　　MI [illegible]

- [illegible]
- [illegible]

□□□□□□□□□□□□□□□□□□□□



□□□□□□□□□□□□.2



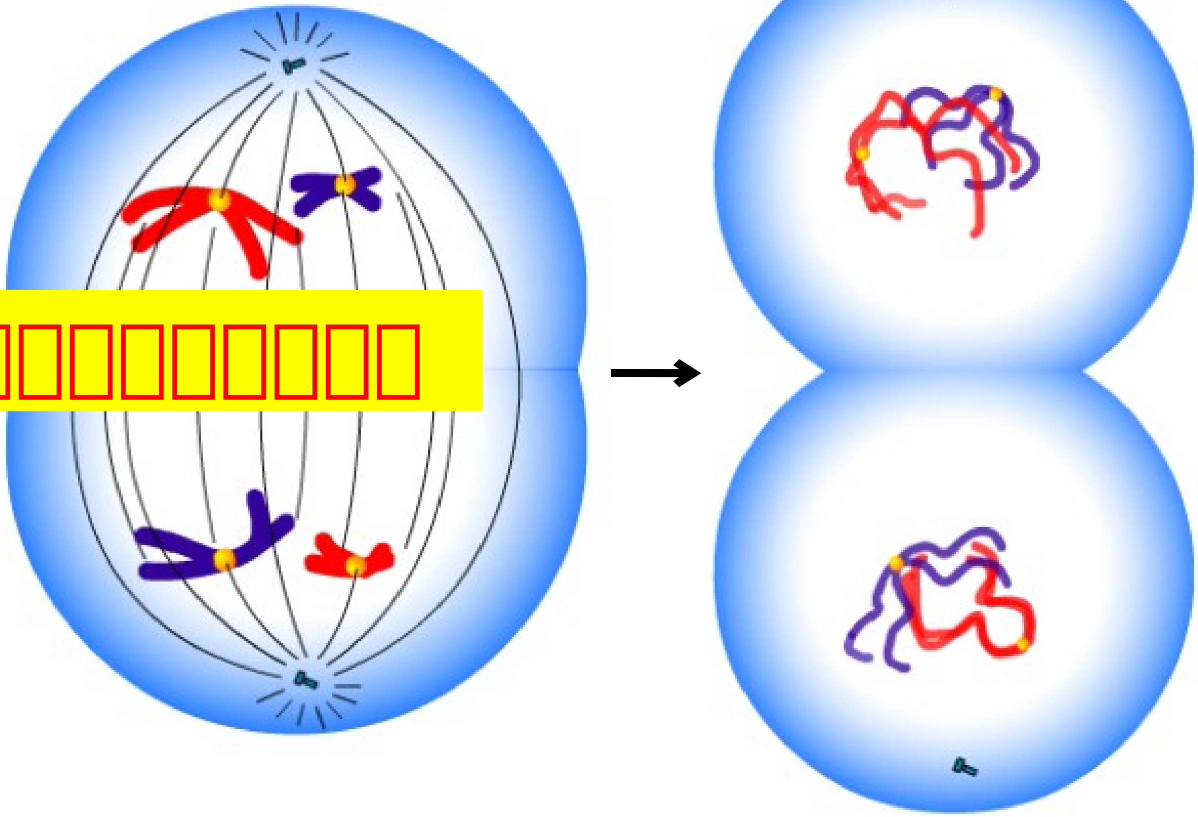
□□□□□□□□□□□

1 □□□□□□□□□□__________□ 1□2□3□4

2 □□□□□□□□□__________1□2□□3□4□

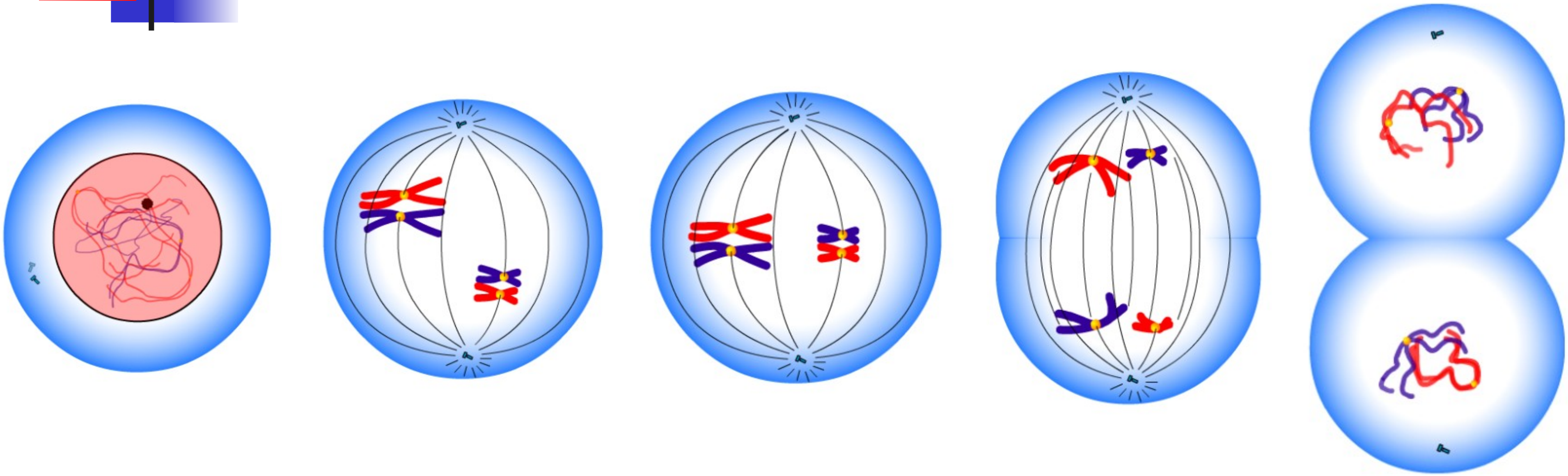
1□3 2□4 □1□4 □□2□3□□□

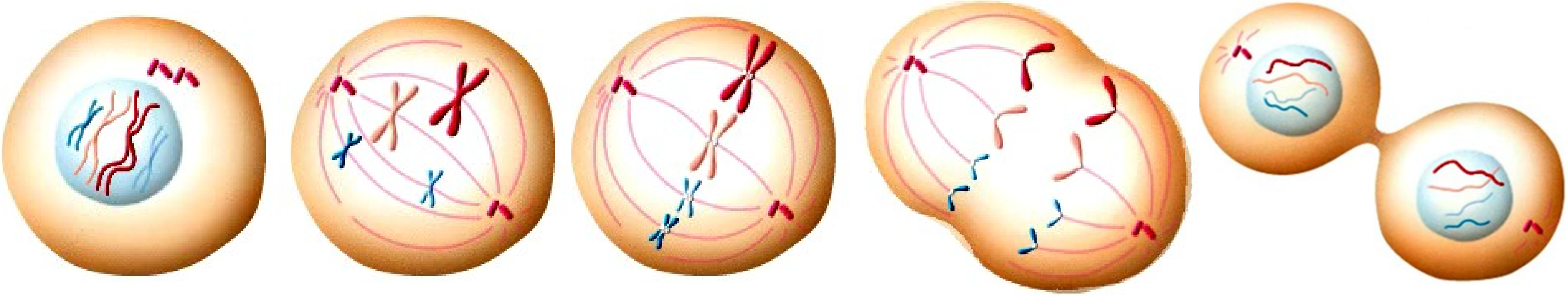
[illegible]

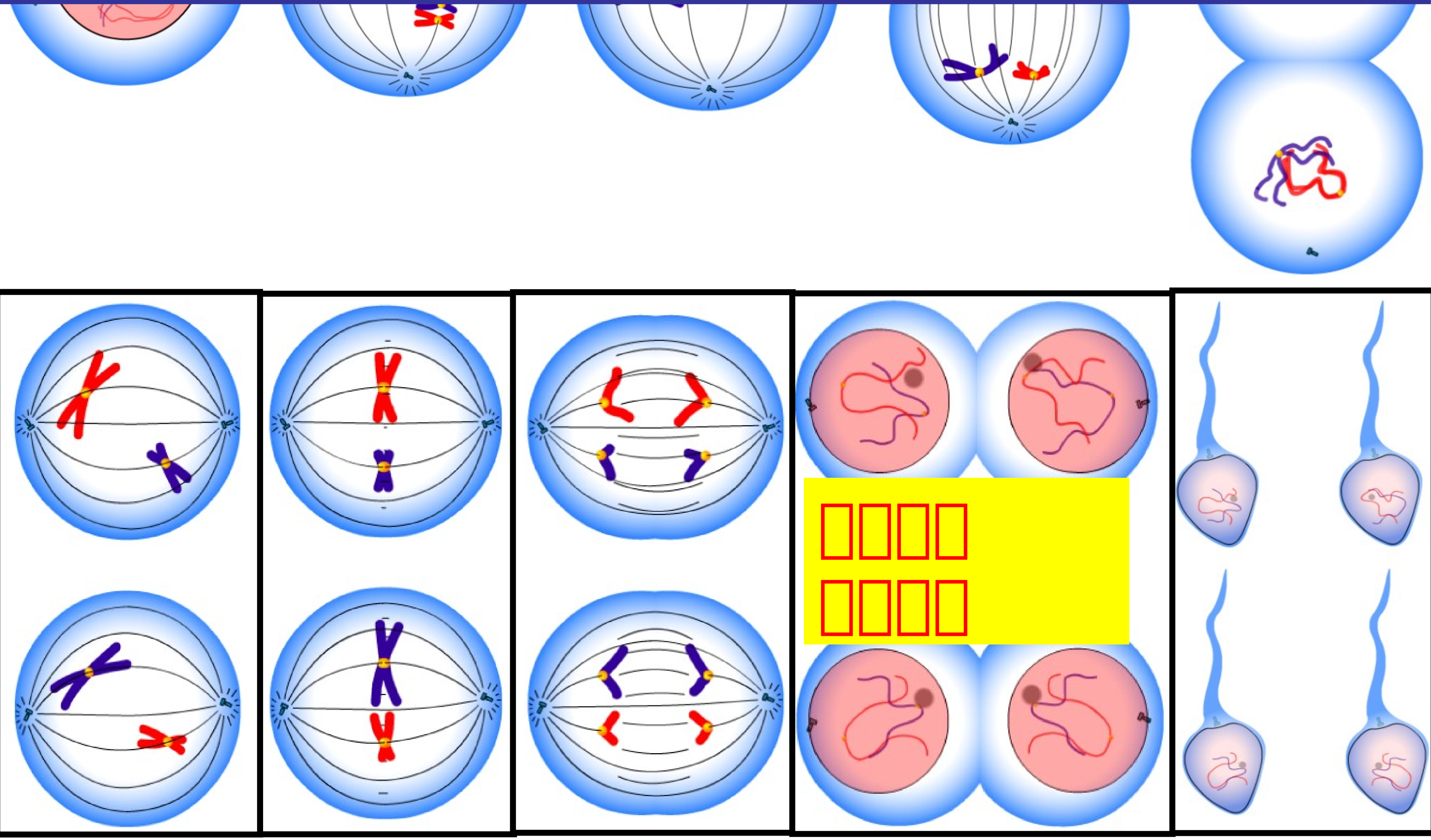

MI [illegible]
MI [illegible]

[illegible]

- [illegible]
- [illegible]
- [illegible]







[illegible]:

[illegible][illegible]:2n[illegible]

[illegible]

[illegible]

1 [illegible][illegible]:2n[illegible]

[illegible]

1 [illegible][illegible]:2n[illegible]

[illegible]

[illegible]

[illegible]

[illegible] 1 [illegible] 1 [illegible]

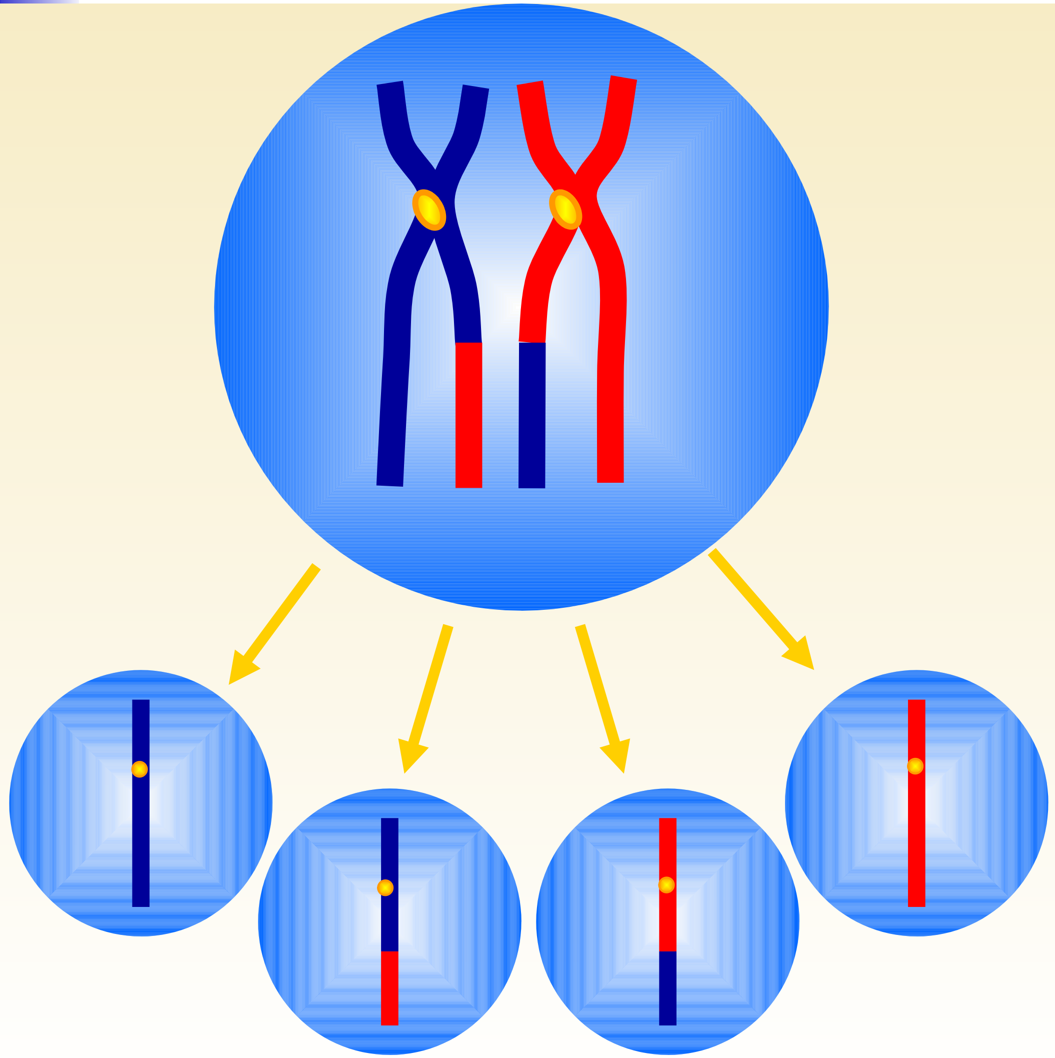
[illegible]I

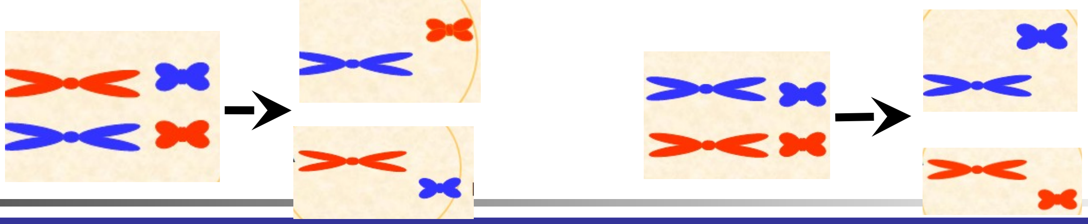
1 [illegible] +1 [illegible][illegible]:n[illegible]

[illegible]

1 [illegible] +3 [illegible][illegible]:n[illegible]

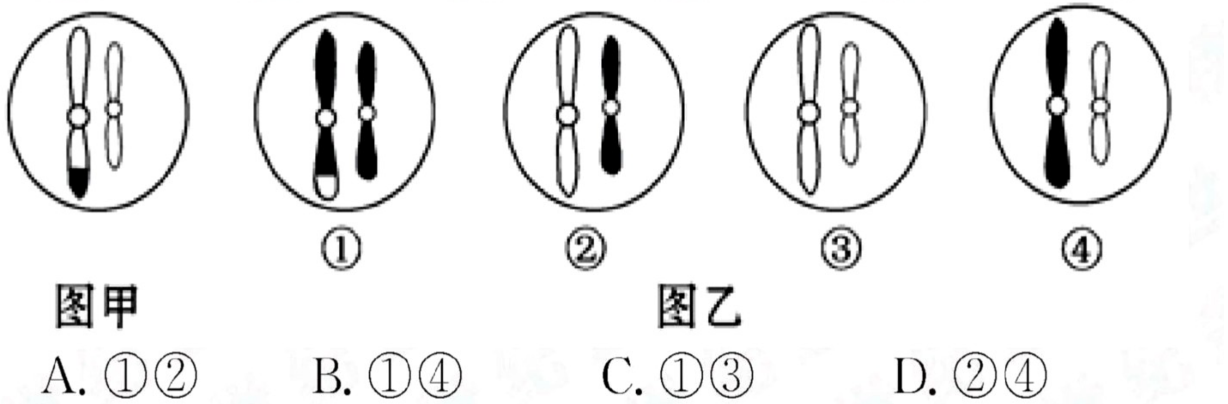
[illegible]II

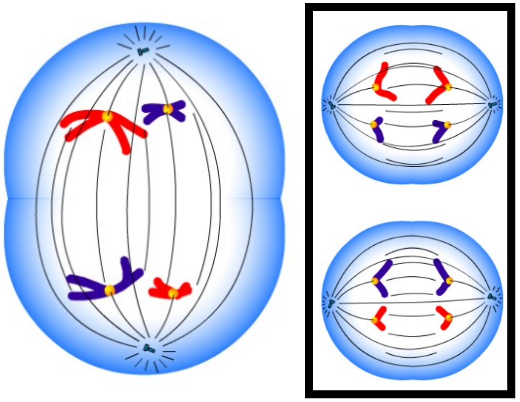




1.

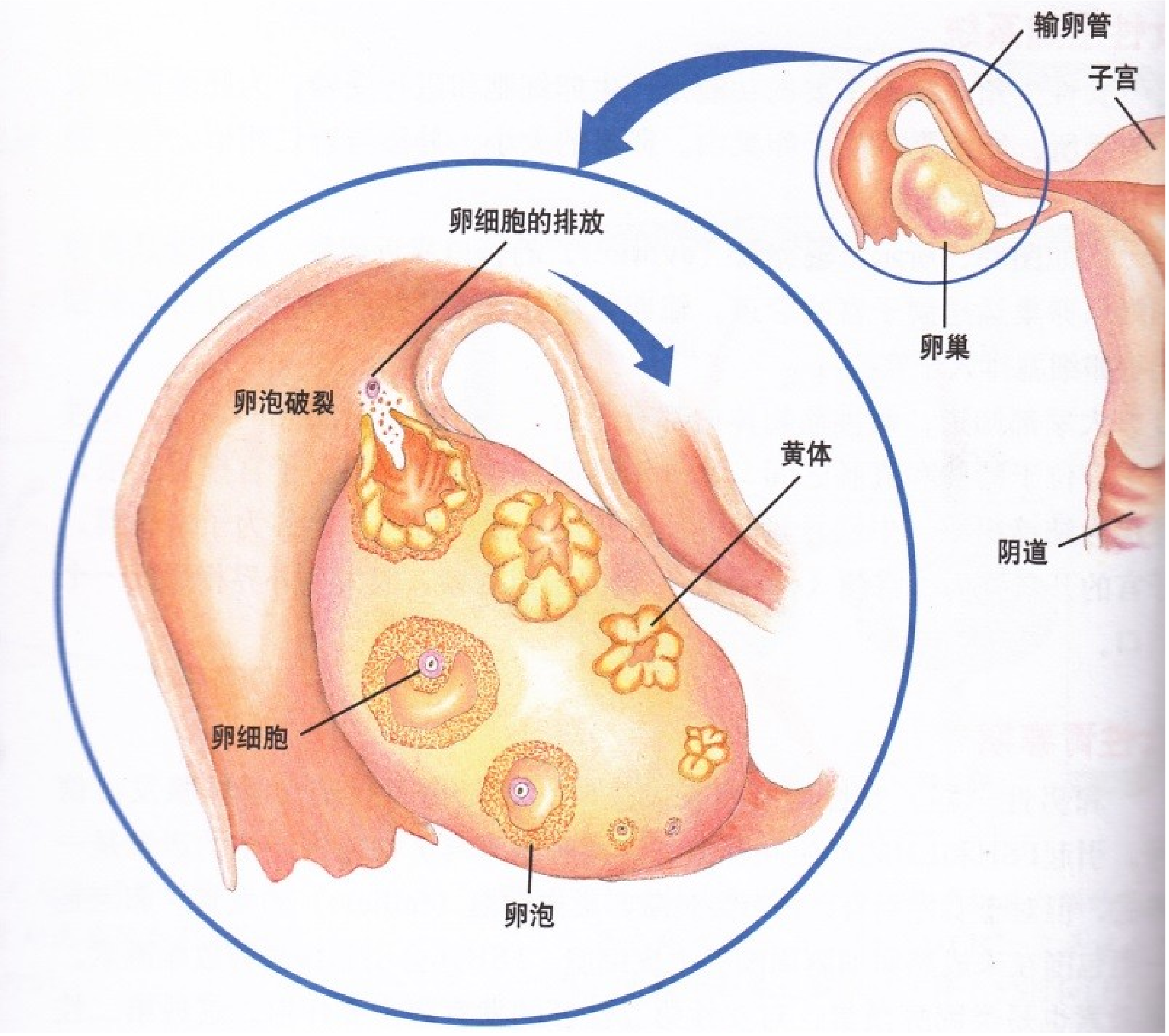
C





[illegible]

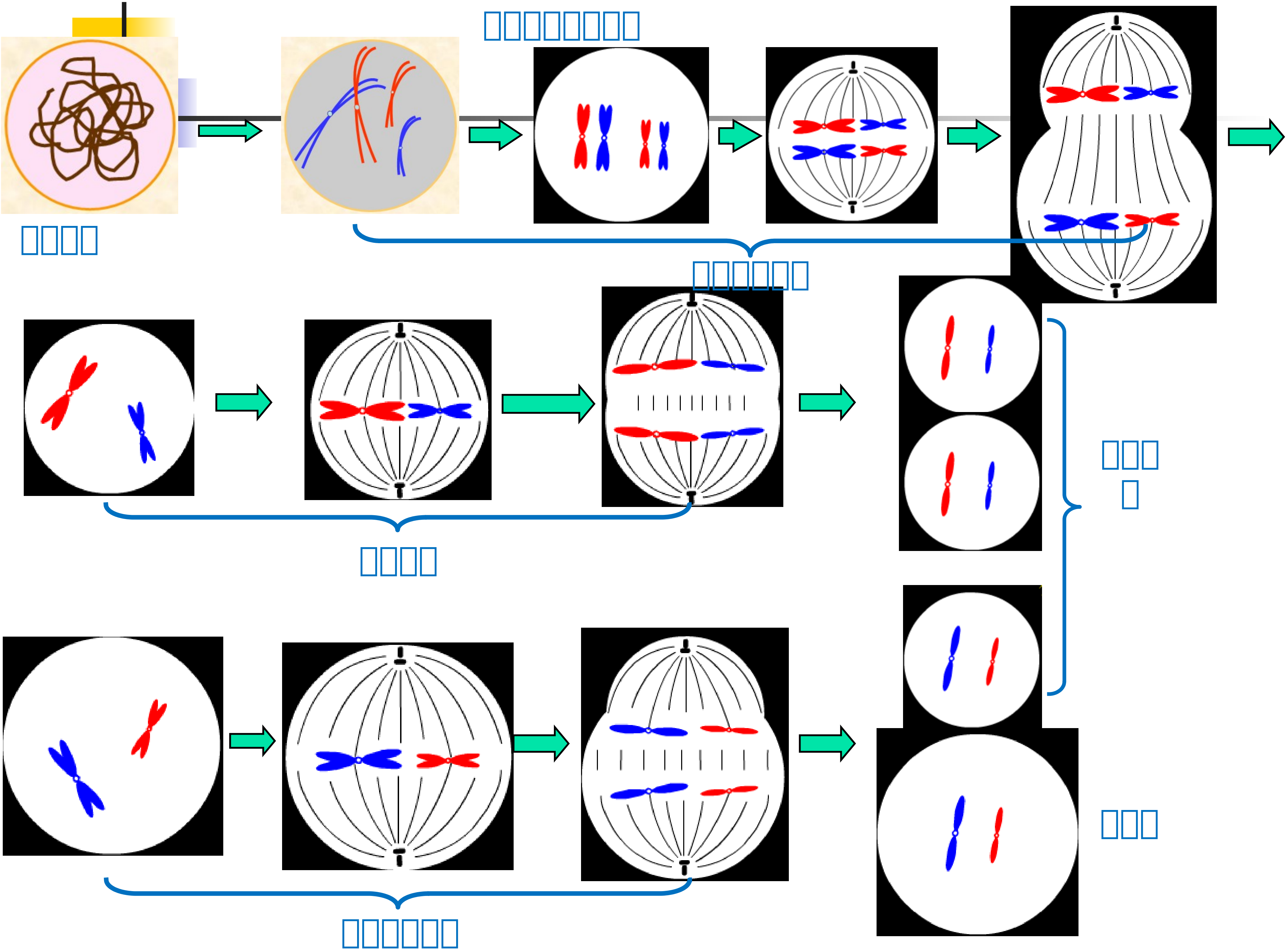
- [illegible]1[illegible] [illegible]3


输卵管
子宫
卵细胞的排放
卵巢
卵泡破裂
黄体
阴道
卵细胞
卵泡

[illegible]

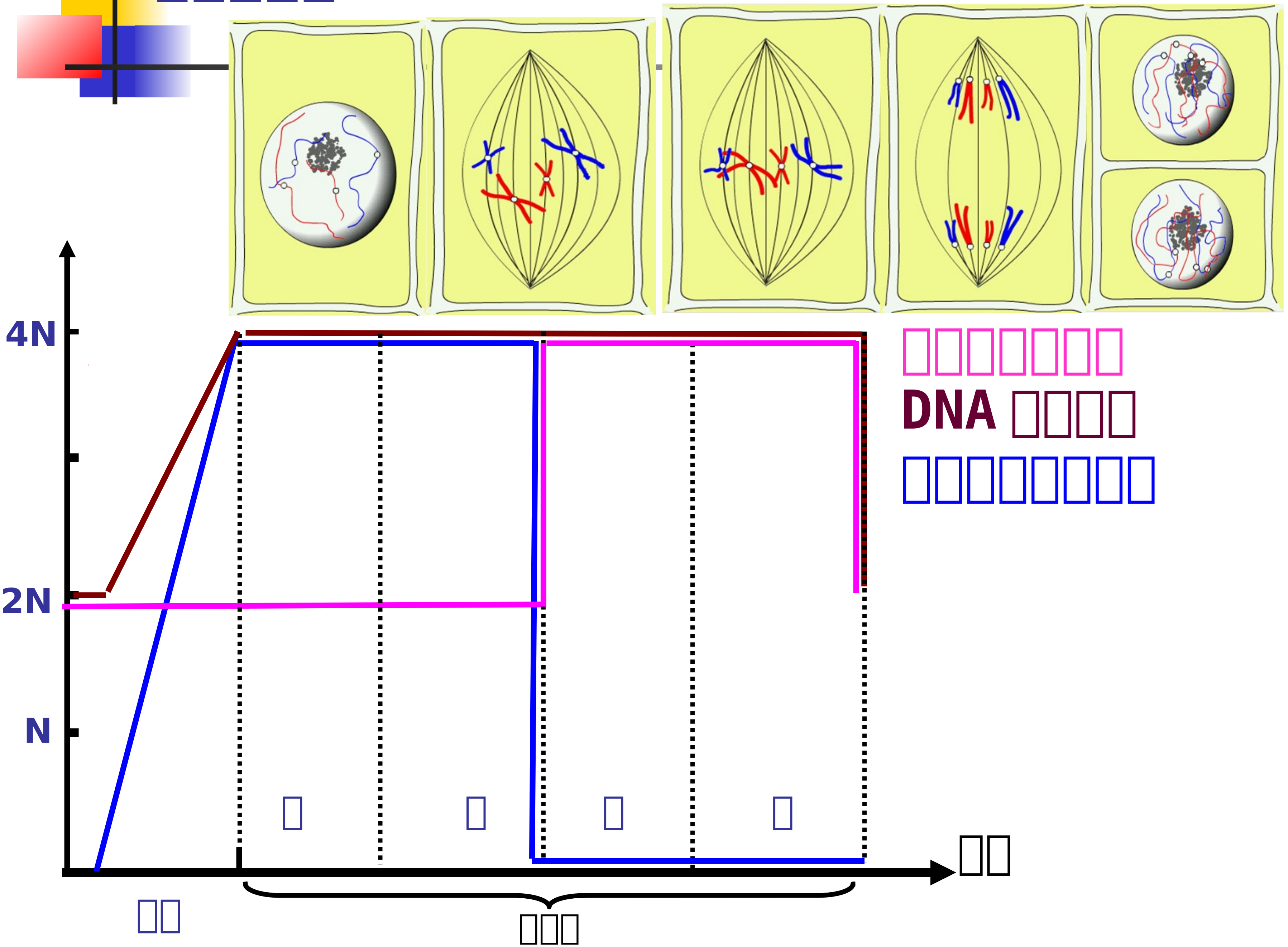
——[illegible]

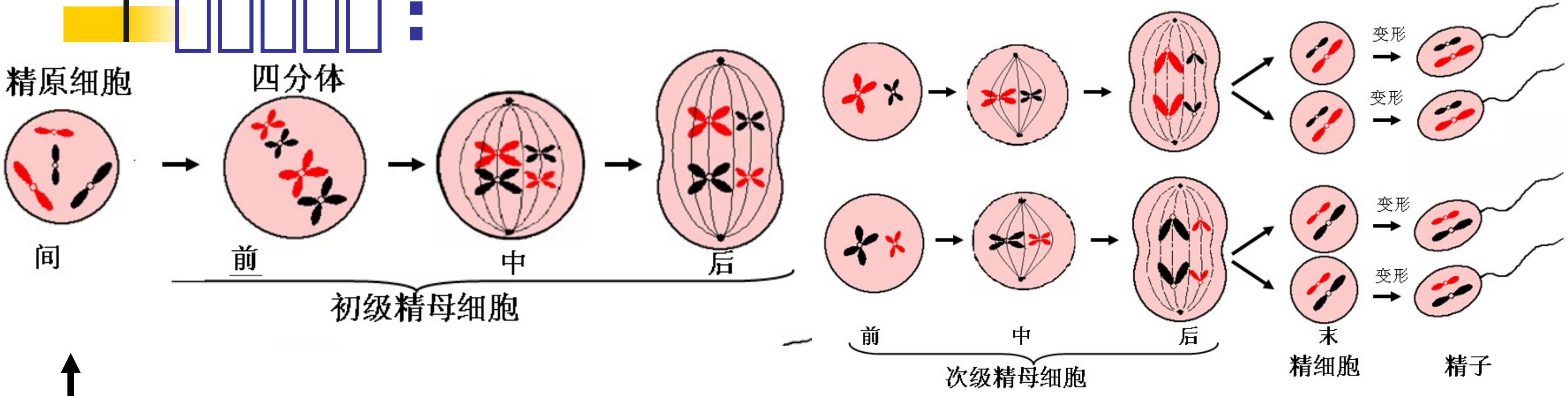
- [illegible]
- [illegible]
- [illegible]
- **1** [illegible] **4** [illegible] **1** [illegible] **[** [illegible] **2-2** [illegible] **2-5]**

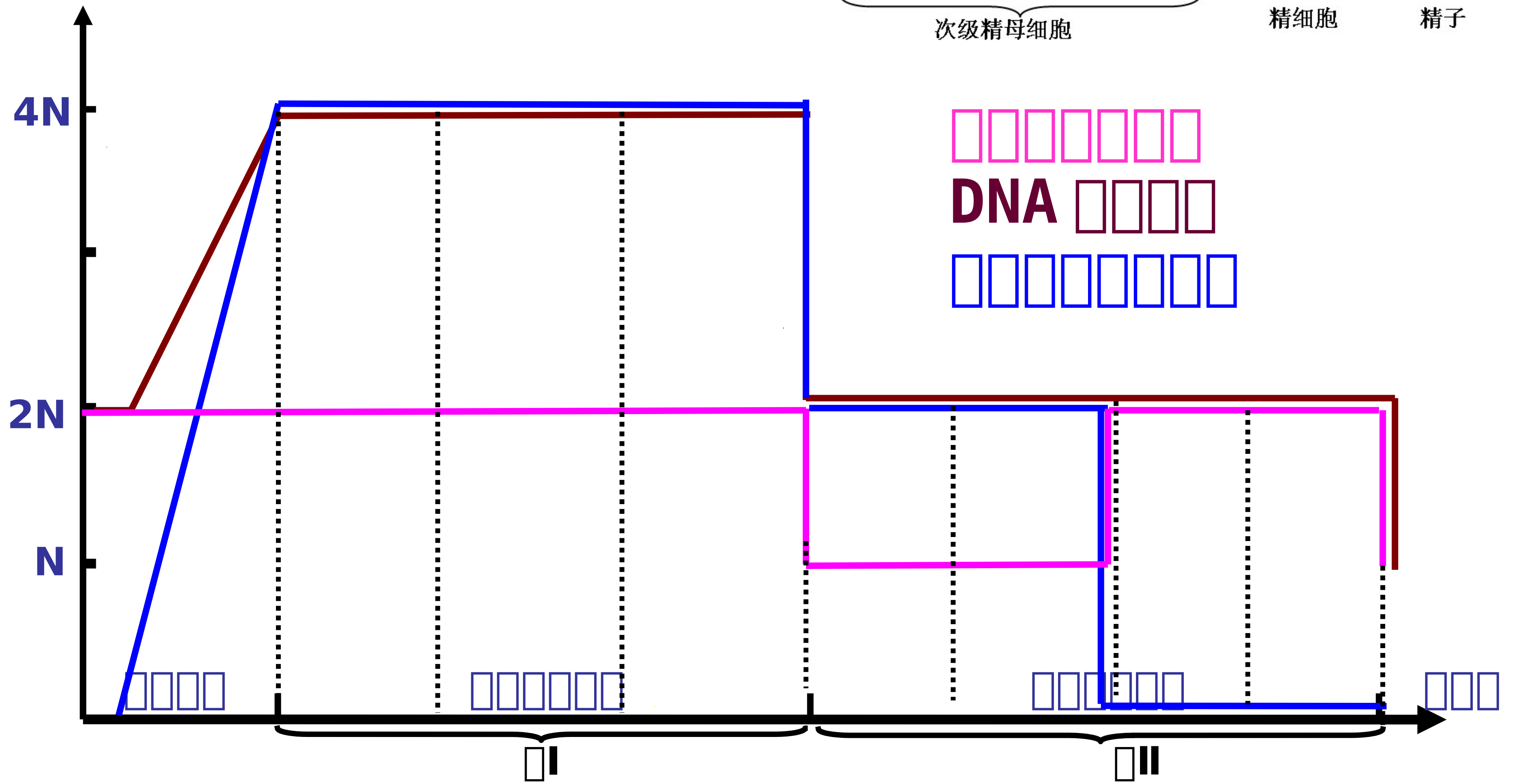


[illegible]

	[illegible]	[illegible]
[illegible]	[illegible]	
[illegible] — [illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

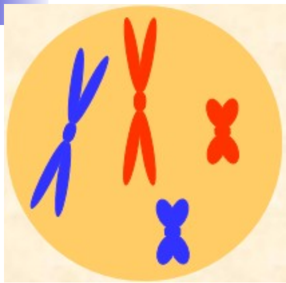

4N
2N
N
DNA


精原细胞
间
四分体
前
中
后
初级精母细胞
前
中
后
次级精母细胞
末
精细胞
变形
变形
变形
变形
精子

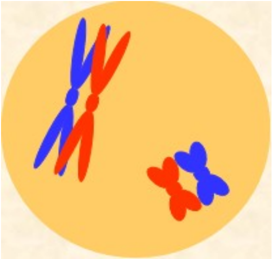

4N
2N
N
DNA
I
II

□□□□

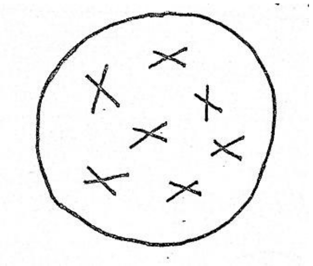
□□□□□□□□□□□□□□□□□□



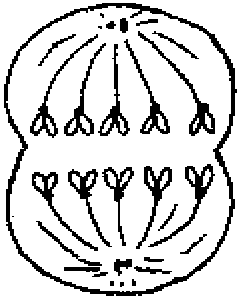
□□□□



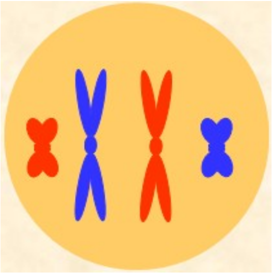
□Ⅰ□□



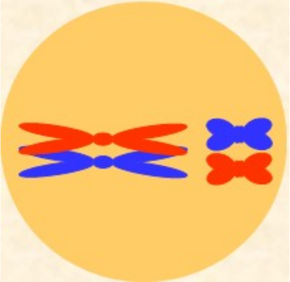
□Ⅱ□□



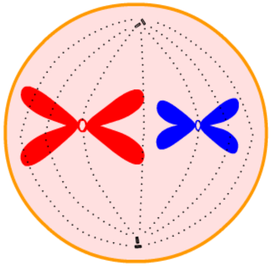
□Ⅱ□□



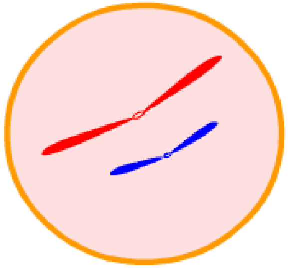
□□□□



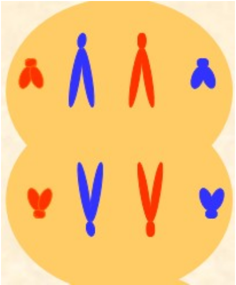
□Ⅰ□□



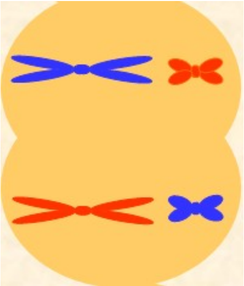
□Ⅱ□□



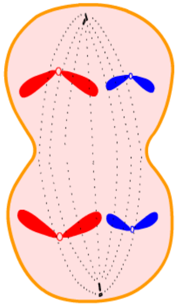
□Ⅱ□□□□□□



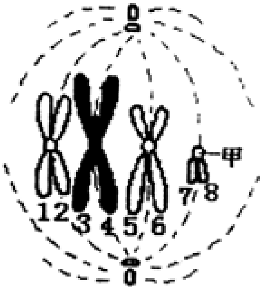
□□□□



□Ⅰ□□

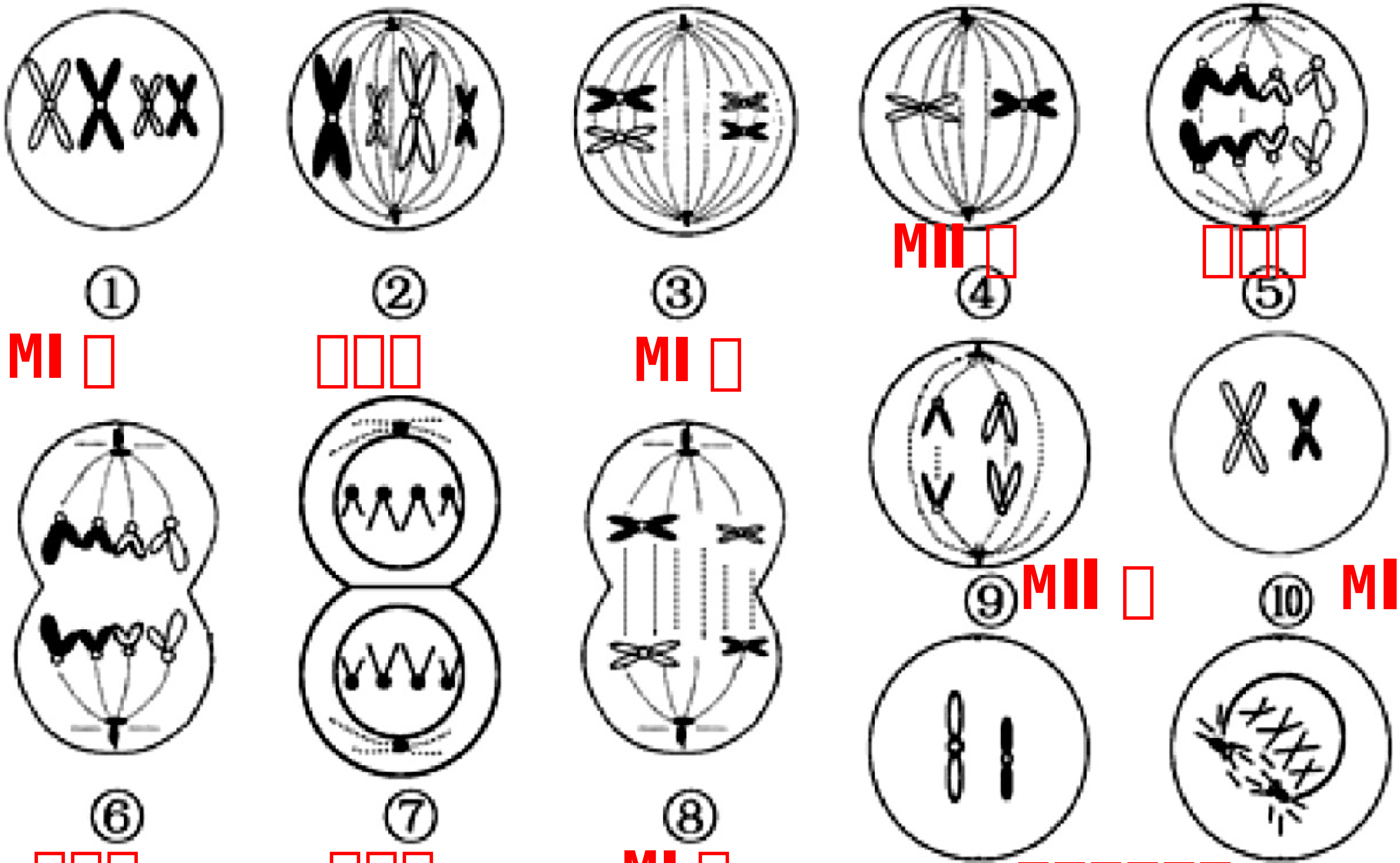


□Ⅱ□□



□Ⅱ□□

[illegible]



①
MⅠ [illegible]
②
③
MⅠ [illegible]
④
MⅡ [illegible]
⑤
⑥
⑦
⑧
MⅠ [illegible]
⑨
MⅡ [illegible]
⑩
MⅡ [illegible]
⑪
⑫

[illegible]

为了观察减数分裂各时期的特点，实验材料选择恰当的是（C　）

①蚕豆的雄蕊　②桃花的雌蕊

③蝗虫的精巢　④小鼠的卵巢

A．①②　　B．③④

C．①③　　D．②④

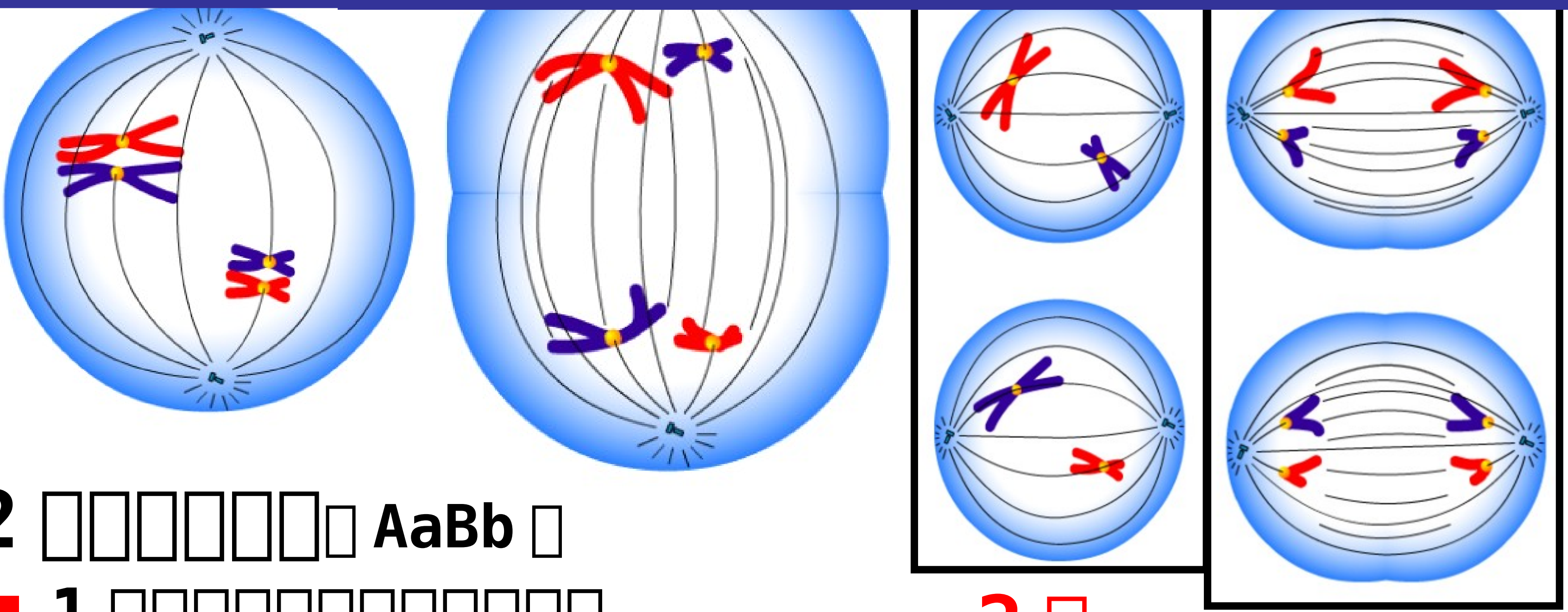
①精巢产生精子多，减数分裂容易观察。
②卵细胞数目少，且在动物卵巢内的减数分裂没有进行彻底。排卵时仅仅是初级或次级卵母细胞，只有和精子相遇后，在精子的刺激下，才能继续完成减数第二次分裂。

观察小鼠的减数分裂：

低渗处理 → 解离固定 → 漂洗 → 染色 → 压片

动物组织细胞充分吸水膨胀，染色体分散，

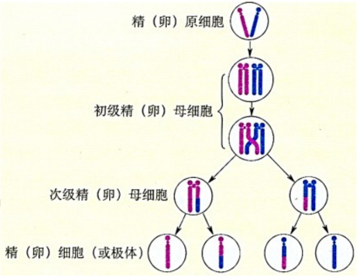
[illegible]
[illegible] [illegible]
[illegible] [illegible]



- 2 [illegible]（AaBb）
  - 1 [illegible]
  - 1 [illegible]
  - [illegible] 100 [illegible]
- [illegible] n [illegible]

2 [illegible]
1 [illegible]
4 [illegible]

[illegible]



[illegible] n [illegible] :

[illegible]

1 [illegible] 1 [illegible] = 2 [illegible] 4 [illegible] 4 [illegible] 4 [illegible]

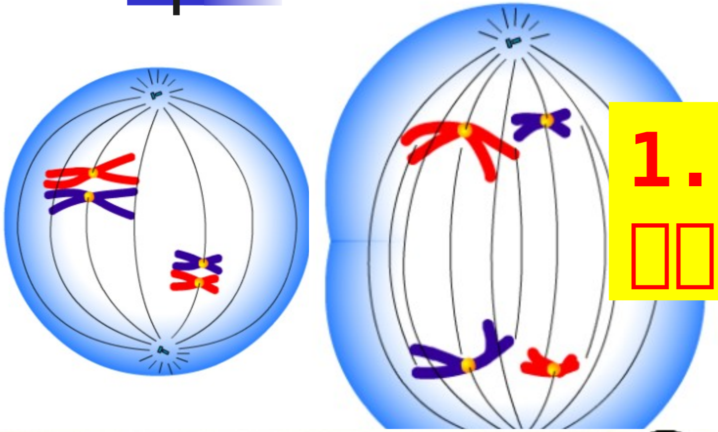
2 [illegible] 1 [illegible] = 1 [illegible] 2 2 [illegible] 2 [illegible]

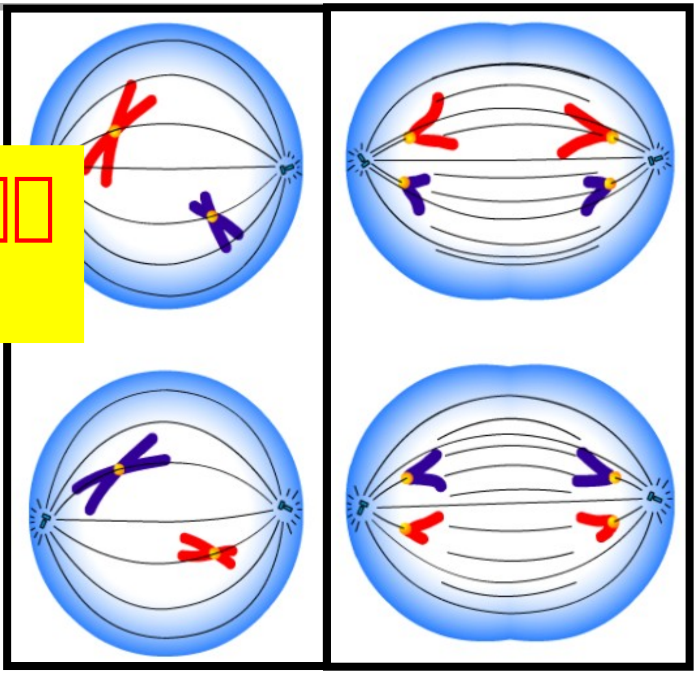
3 [illegible] = 2^n [illegible] n [illegible] [illegible]

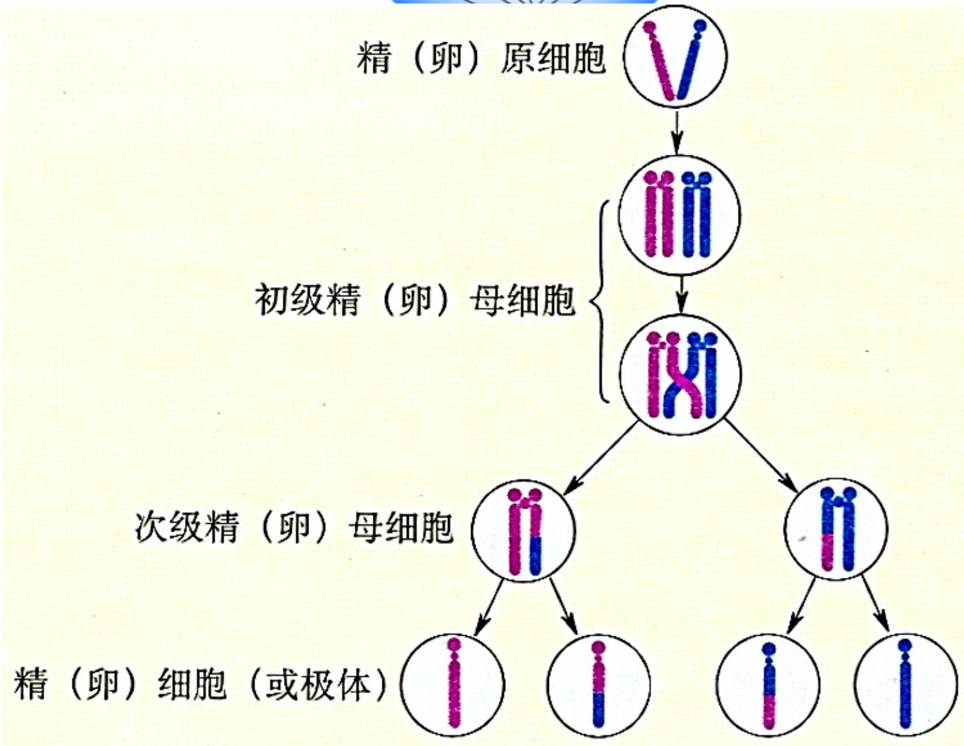
4 [illegible] 1 [illegible] = 1 [illegible] 1 [illegible] 1 [illegible] 1 [illegible]

5 [illegible] 1 [illegible] = 1 [illegible] 1 [illegible] 1 [illegible] 1 [illegible]

6 [illegible] = 2^n [illegible] n [illegible] [illegible]

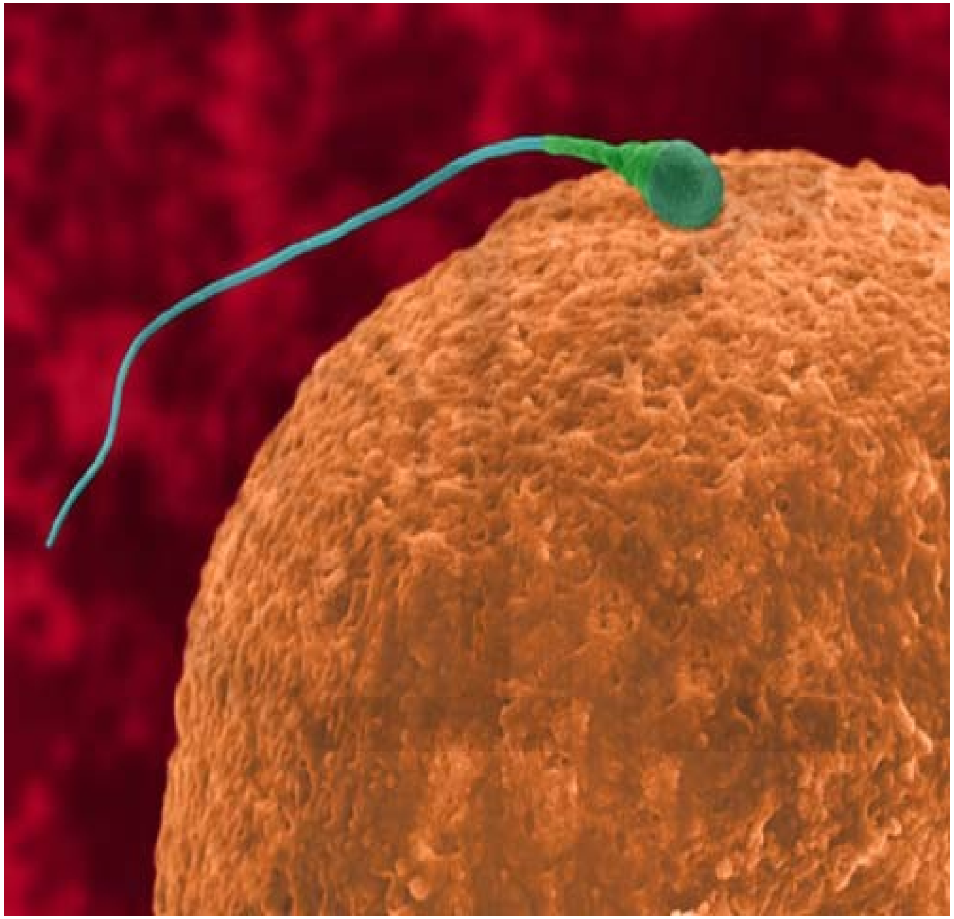


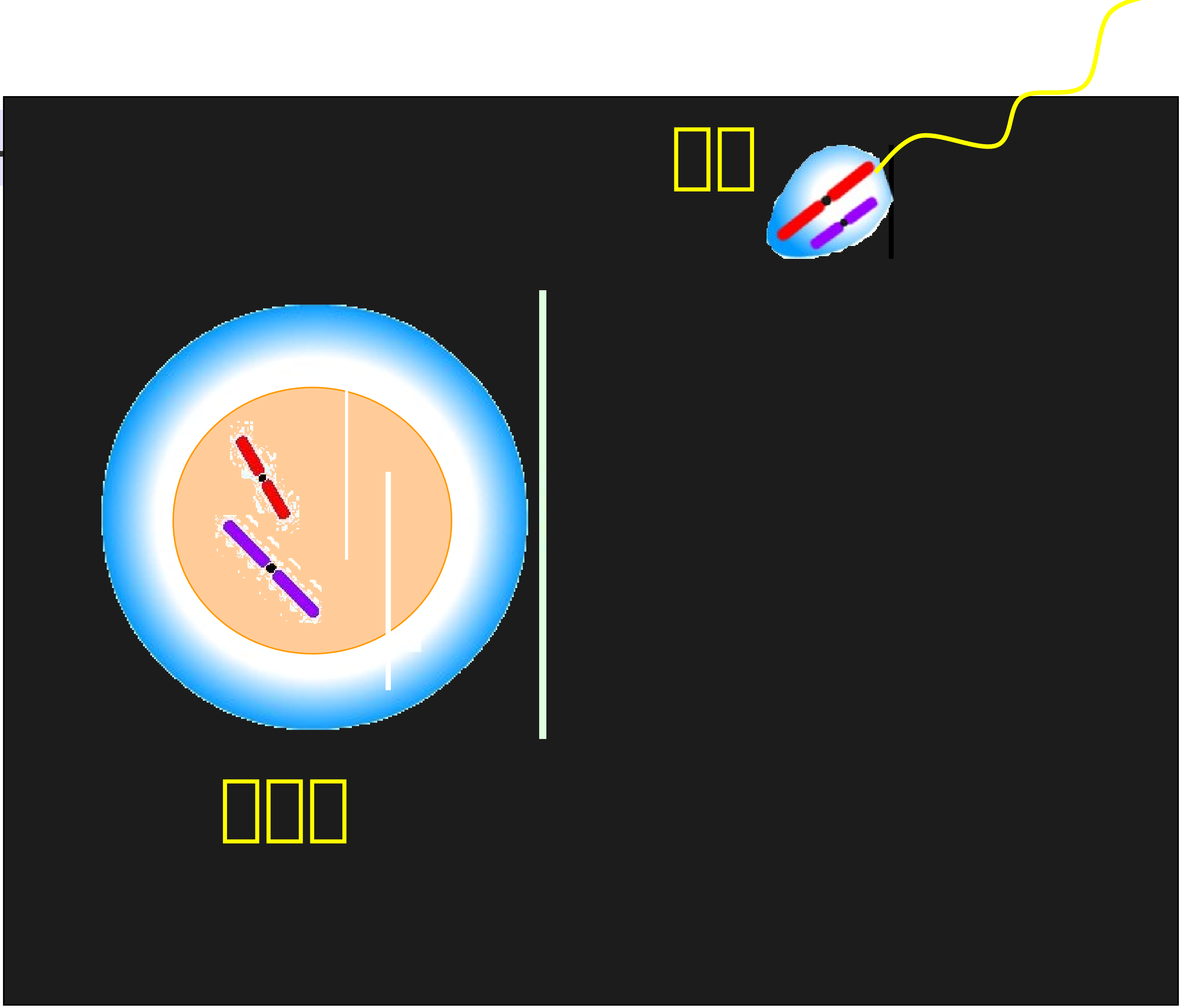


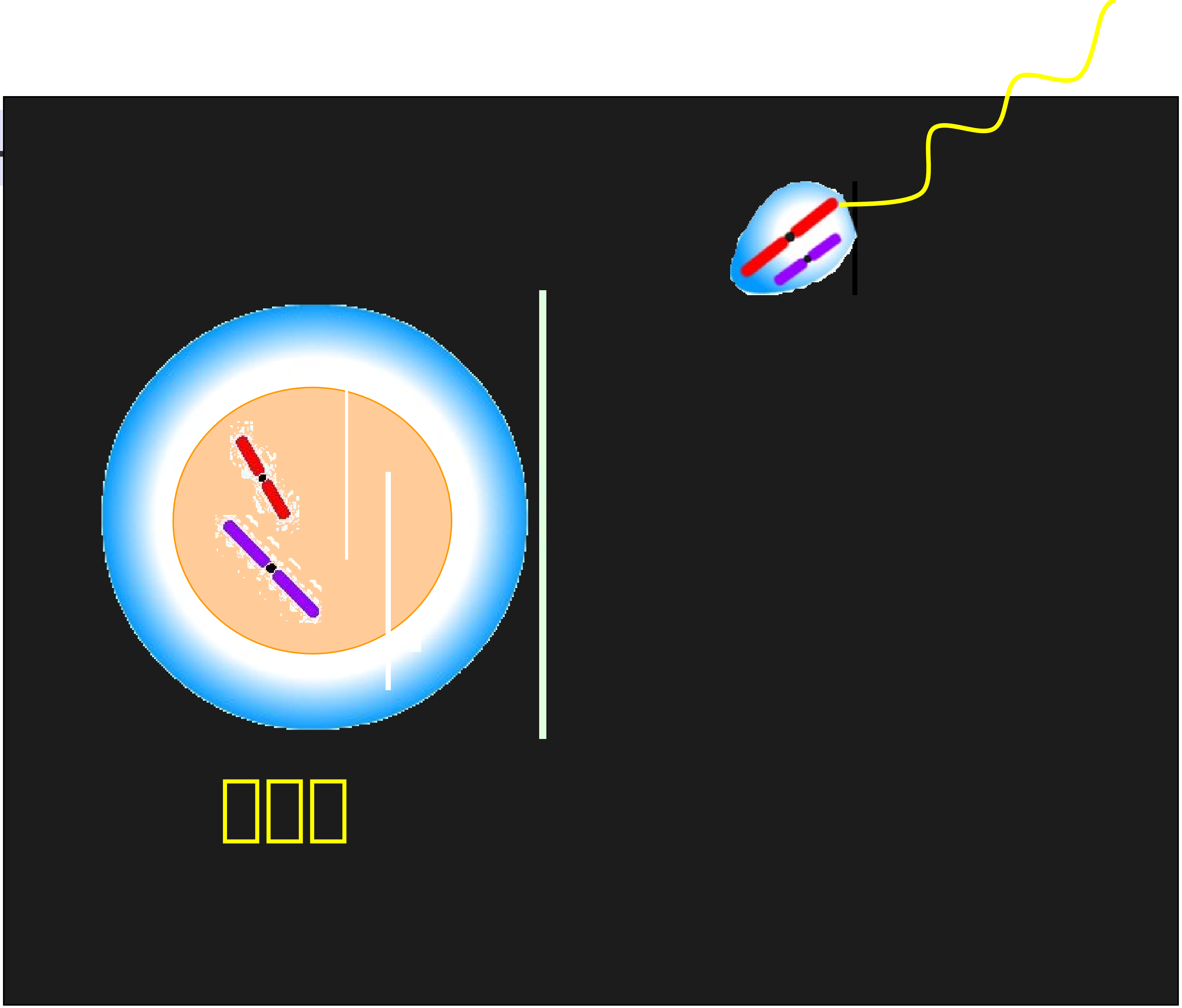

精（卵）原细胞
初级精（卵）母细胞
次级精（卵）母细胞
精（卵）细胞（或极体）

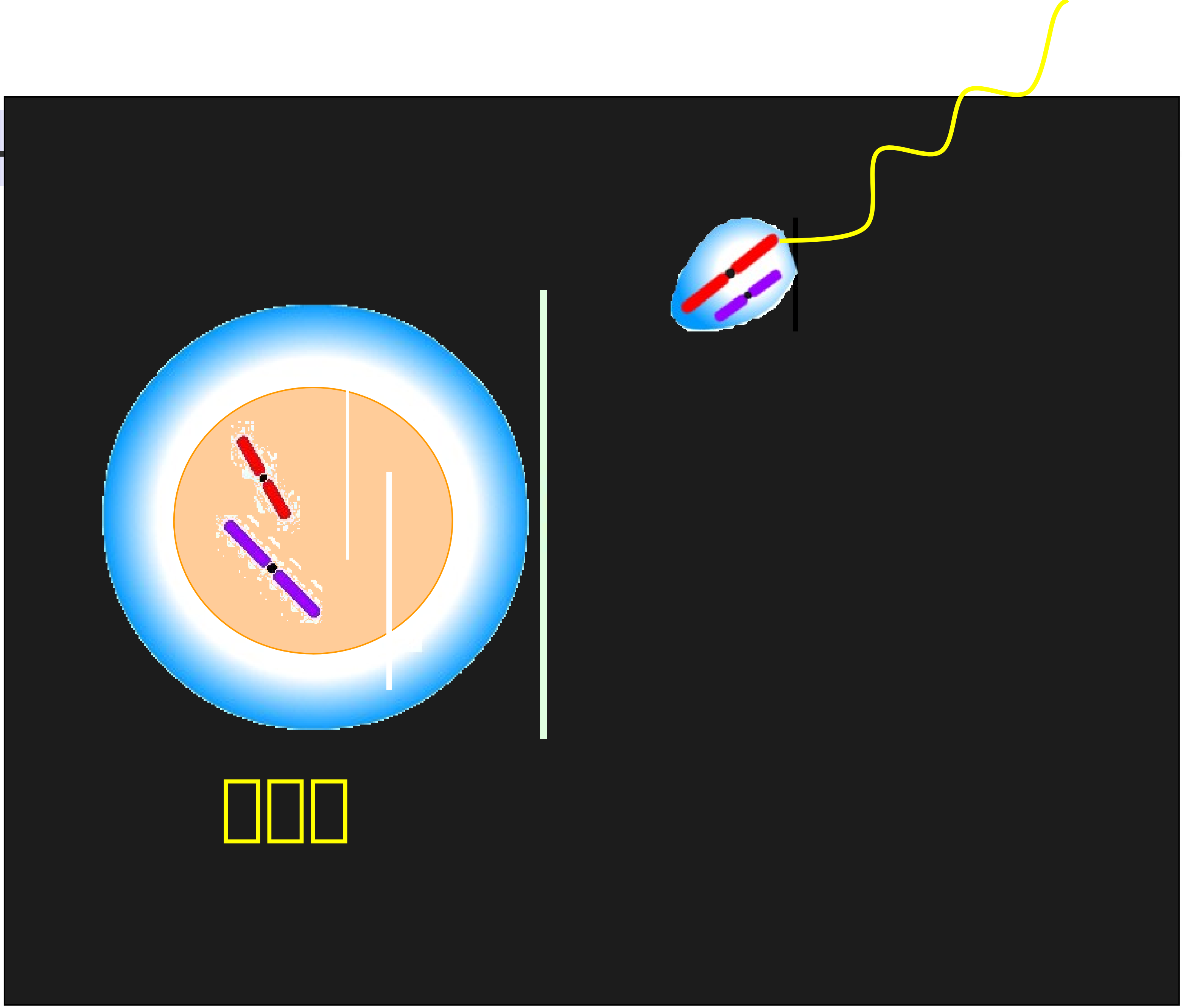
[illegible]

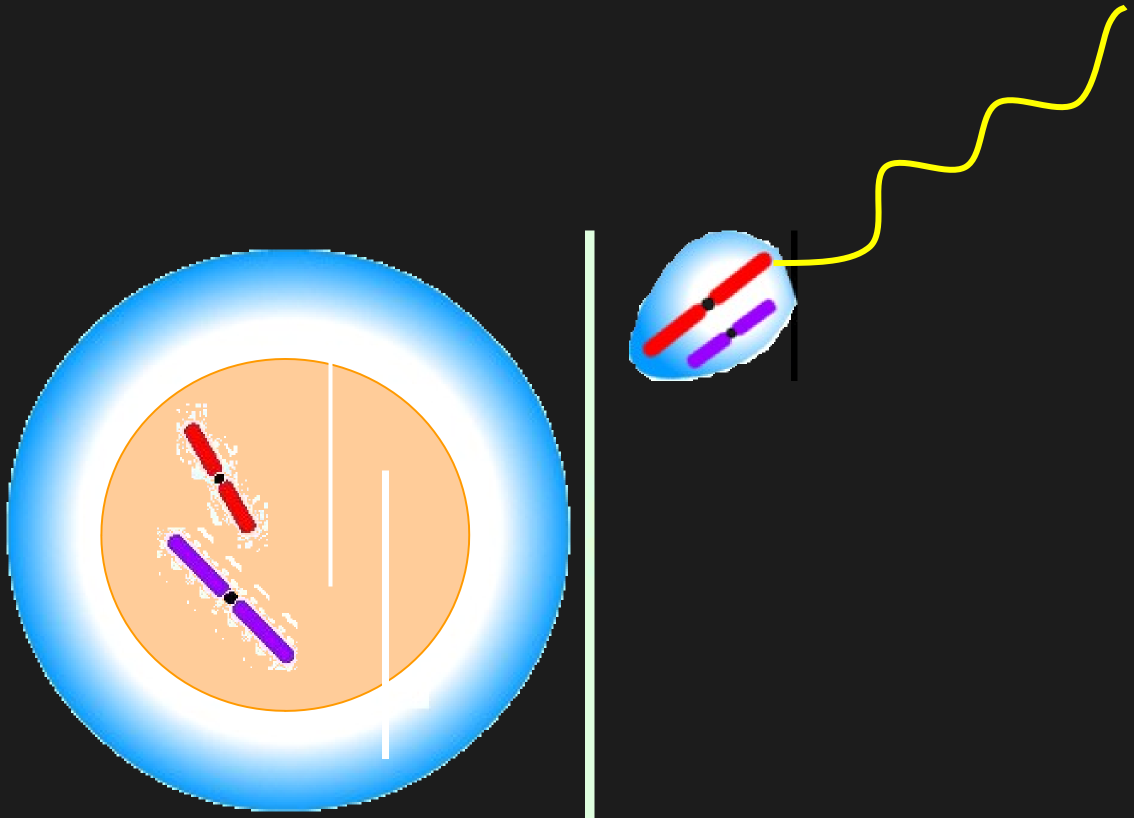
1. [illegible]

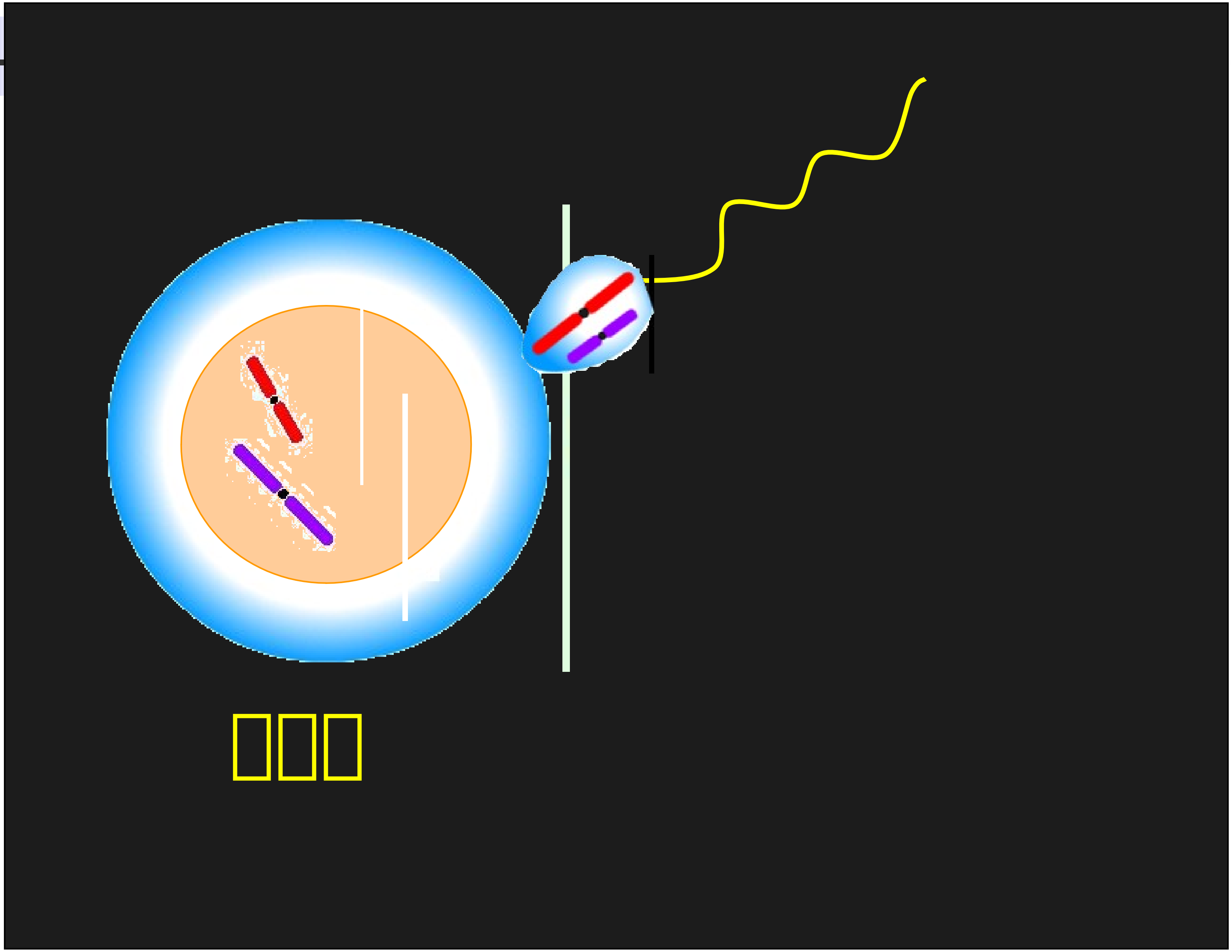


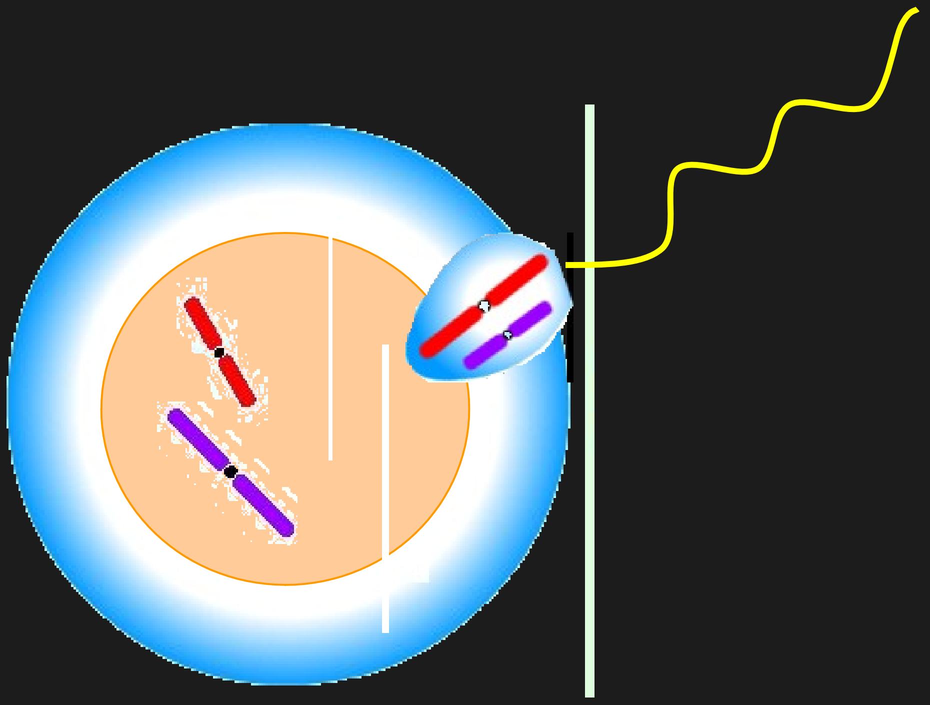


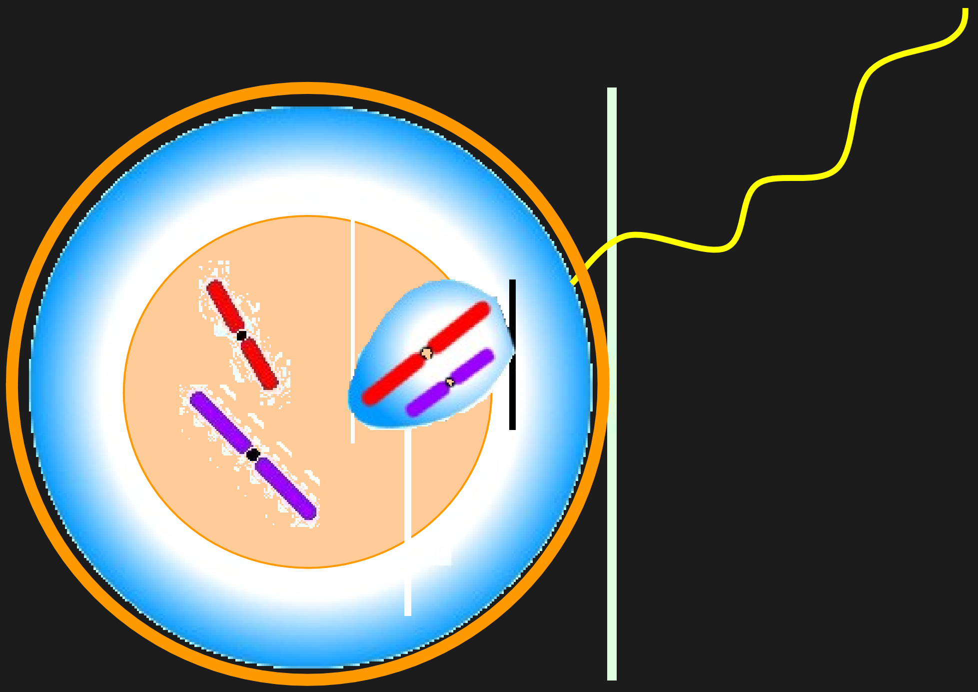


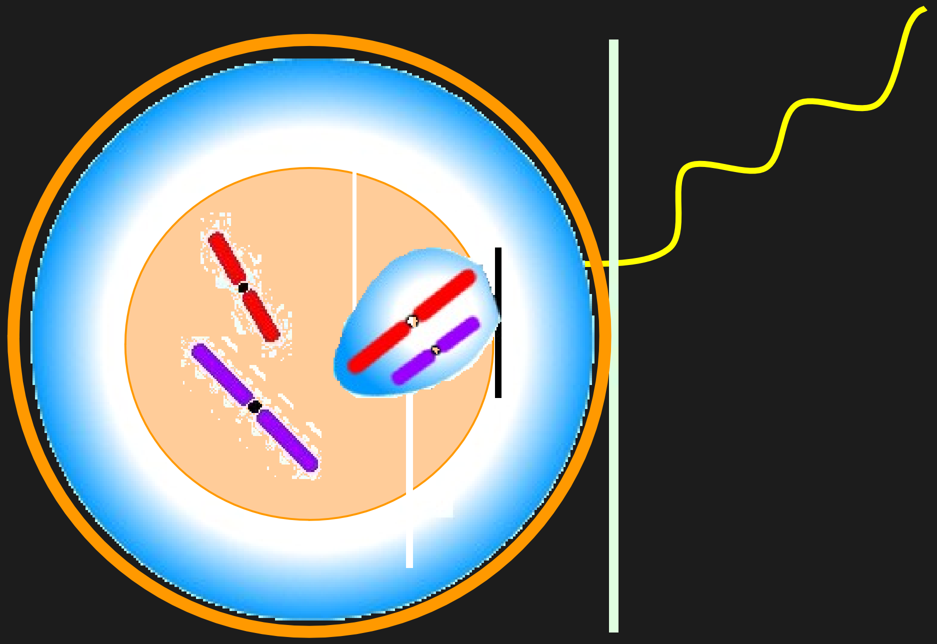


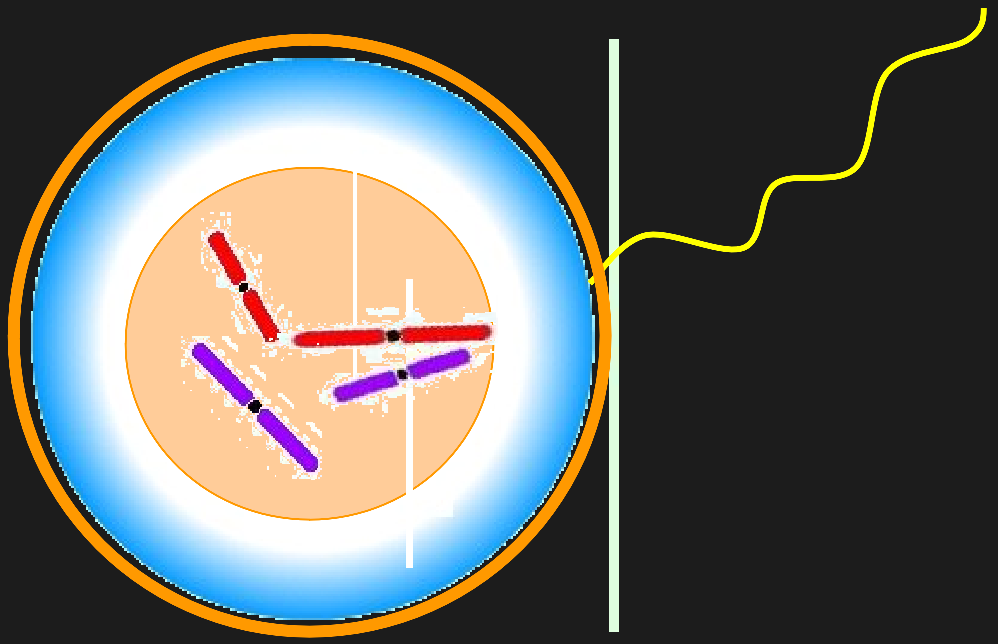












[illegible]

2. [illegible]

① [illegible]

② [illegible]

③ [illegible] ________ [illegible]

[illegible]

- [illegible]

[illegible]

[illegible]

3. [illegible]

4. [illegible]

1. [illegible]
2. [illegible]

[illegible]

1. [illegible]

√

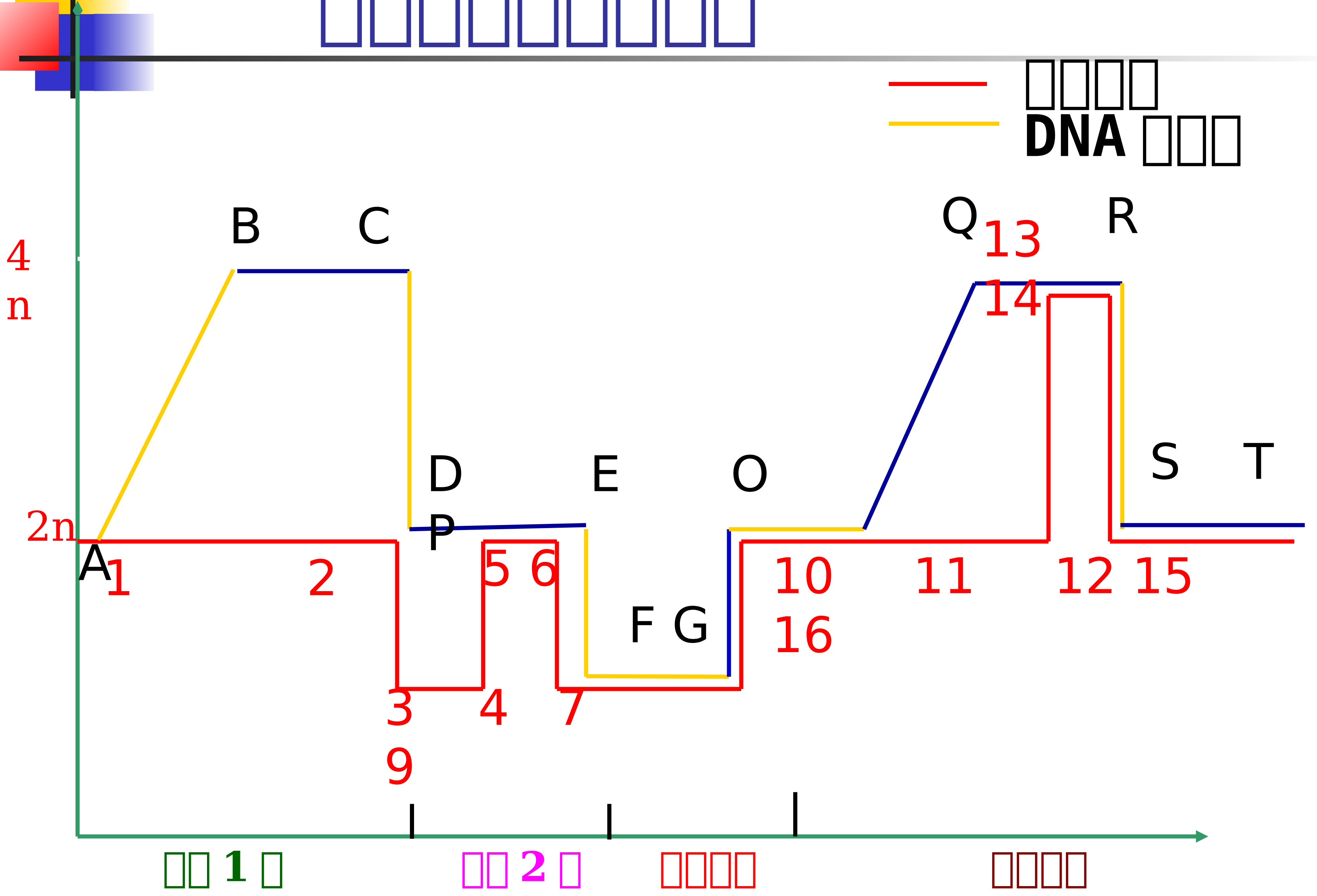
2. [illegible]

3. [illegible]23[illegible]DNA[illegible]√46[illegible]

4. [illegible]

×

×


DNA
B
C
Q
R
13
14
4
n
D
P
E
O
S
T
2n
A
1
2
5
6
10
16
11
12
15
F
G
3
4
7
9
1
2